REVISED VERSION

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 18 October 2001 (18.10.2001)

PCT

(10) International Publication Number WO 01/077793 A2

(51) International Patent Classification7:

- (21) International Application Number: PCT/US01/11378
- (22) International Filing Date: 6 April 2001 (06.04.2001)
- (25) Filing Language:

English

G06F 1/00

(26) Publication Language:

English

(30) Priority Data: 09/545,208

7 April 2000 (07.04.2000) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:

US

09/545,208 (CON)

Filed on

7 April 2000 (07.04.2000)

- (71) Applicant (for all designated States except US): HIGH TECH VENTURES, INC. [US/US]; 18 Hurley Street, Cambridge, MA 02141 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): TAKACS, Edward [US/US]; 505 Union Wharf, Boston, MA 02109 (US). FINKELSTEIN, Boris [IT/US]; 10B Gardener Road, Cambridge, MA 02139 (US). BERCHICCI, Giuliana [IT/US]; 505 Union Wharf, Boston, MA 02109 (US). CLIFFORD, James [US/US]; 14 Greenview Street, Apt. 4, Framingham, MA 01701 (US).

(74) Agent: HIEKEN, Charles; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).

- (81) Designated States (national): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

- with declaration under Article 17(2)(a); without abstract;
 title not checked by the International Searching Authority
- (48) Date of publication of this revised version:

18 September 2003

(15) Information about Corrections:

see PCT Gazette No. 38/2003 of 18 September 2003, Section II

Previous Correction:

see PCT Gazette No. 11/2002 of 14 March 2002, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

PATENT COOPERATION TREATY

PCT

DECLARATION OF NON-ESTABLISHMENT OF INTERNATIONAL SEARCH REPORT

(PCT Article 17(2)(a), Rules 13ter.1(c) and Rule 39)

	.,		
Applicant's or agent's file reference	IMPORTANT DE	CLARATION	Date of mailing (day/month/year) 10/10/2002
International application No. PCT/US 01/ 11378	International filing date(d	ay/month/year) 06/04/2001	(Earliest) Priority date(day/month/year) 07/04/2000
International Patent Classification (IPC) or both national classification and IPC g06f1/00			
Applicant HIGH TECH VENTURES, INC.			
night fech ventores, inc.			
This international Searching Authority hereby declares, according to Article 17(2)(a), that no international search report will be established on the international application for the reasons indicated below 1. X The subject matter of the international application relates to:			
a. scientific theories.			
b. mathematical theories			
c. plant varieties.			
d. animal varieties.			
e. essentially biological processes for the production of plants and animals, other than microbiological processes			
and the products of such processes. f. schemes, rules or methods of doing business.			
g. schemes, rules or methods of performing purely mental acts.			
h. schemes, rules or methods of playing games.			
j. Imethods for treatment of the animal body by surgery or therapy.			
k. diagnostic methods practised on the human or animal body.			
l. mere presentations of Information.			
m. Computer programs for which this International Searching Authority is not equipped to search prior art.			
2. The failure of the following parts of the international application to comply with prescribed requirements prevents a meaningful search from being carried out:			
the description	the claims		the drawings
3. The failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative instructions prevents a meaningful search from being carried out:			
the written form has not been furnished or does not comply with the standard.			
the computer readable form has not been furnished or does not comply with the standard.			
4. Further comments:			
Name and mailing address of the Internation	nal Searching Authority	Authorized officer	
European Patent Office, P.B. 5 NL-2280 HV Rijswijk	5818 Patentlaan 2	Selwa Hai	cris
Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3016			

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 203

The claims relate to subject matter for which no search is required according to Rule 39 PCT. Given that the claims are formulated in terms of such subject matter or merely specify commonplace features relating to its technological implementation, the search examiner could not establish any technical problem which might potentially have required an inventive step to overcome. Hence it was not possible to carry out a meaningful search into the state of the art (Art. 17(2)(a)(i) and (ii) PCT; see Guidelines Part B Chapter VIII, 1-6).

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 18 October 2001 (18.10.2001)

PCT

(10) International Publication Number WO 01/77793 A2

(51) International Patent Classification7: G06F 1/00

(21) International Application Number: PCT/US01/11378

(22) International Filing Date: 6 April 2001 (06.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 09/545,208 7 April 2000 (07.04.2000) US

(71) Applicant (for all designated States except US): HIGH TECH VENTURES, INC. [US/US]; 18 Hurley Street, Cambridge, MA 02141 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): TAKACS, Edward

[US/US]; 505 Union Wharf, Boston, MA 02109 (US). FINKELSTEIN, Boris [IT/US]; 10B Gardener Road, Cambridge, MA 02139 (US). BERCHICCI, Giuliana [IT/US]; 505 Union Wharf, Boston, MA 02109 (US). CLIFFORD, James [US/US]; 14 Greenview Street, Apt. 4, Framingham, MA 01701 (US).

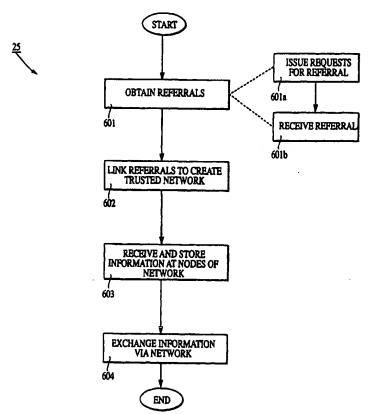
(74) Agent: HIEKEN, Charles; Fish & Richardson P.C., 225 Franklin Street, Boston, MA 02110-2804 (US).

(81) Designated States (national): AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CO, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European

[Continued on next page]

(54) Title: EXCHANGING INFORMATION OVER A TRUSTED NETWORK OF PEOPLE



(57) Abstract: Referrals are obtained from people, and at least some of the people are linked based on the referrals to create a trusted network. Linking includes storing relationships between at least some of the people that define at least a portion of the trusted network. Information is exchanged with one or more of the people via the trusted network.



patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

 without international search report and to be republished upon receipt of that report

EXCHANGING INFORMATION OVER A TRUSTED NETWORK OF PEOPLE

Background of the Invention

5 This invention relates generally to creating links between people based on trust, and to exchanging information based on those links.

Important decisions are often made based on referrals from others. For example, one might rely on a referral when selecting a doctor, a movie, a job, or a potential employee. Typically, referrals are solicited from those whose judgment is trusted, particularly for important matters, such as employment, medical care, investments, and the like.

10

Heretofore, referrals were obtained directly from the source or through "word of mouth".

Summary of the Invention

In general, in one aspect, the invention features obtaining trusted referrals from people, linking at least some of the people based on the trusted referrals to create a trusted network on a computer, and using information on the trusted network. Through the computerized trusted network, a user is given ready access to the trusted referrals and other information regardless of the

availability of those issuing the referrals and/or providing the other information.

This aspect of the invention may include one or more of the following. The referrals are obtained in response to requests. Linking includes storing relationships between at least some of the people that define at least a portion of the trusted network. Each person on the trusted network is a node of the trusted network. Information is stored in association with nodes of the trusted network. The information relates to a person corresponding to a node of the trusted network and may be an assessment relating to the competency of the person corresponding to the node.

10

15

20

Using the information includes sending an electronic mail (e-mail) message to one or more of the people on the trusted network. The e-mail message is delivered to the one or more people based on settings for the one or more people and based on links in the trusted network. The settings include listening preferences that define which e-mail messages a person on the trusted network wants to receive.

The trusted referrals may relate to products and/or services for sale. The e-mail message includes advertising for such products or services that is targeted to the one or more people. The information used on the trusted network is a referral relating to a person, place or thing, such as

customer referrals for goods and/or services. Using the information encompasses a buyer and a seller on the trusted network exchanging information relating to products and/or services for sale over the trusted network.

Data is obtained about a person on the trusted network of people. Using the information includes matching the person to a position based on the data about the person.

The data includes background information for the person and a desired position. The background information includes a personal profile that includes one or more of educational history, employment history, and skills of the person.

The trusted referrals include trust in judgment and/or trust in professional competency/skills. At least one of the trusted referrals includes information relating to a degree of trust. The degree of trust includes an assessment of the professional competency of a person who is the subject of the at least one trusted referral. Using the information includes obtaining information relating to one or more of the people via the trusted network based on the degree of trust. A rating of trust for a person on the trusted network is obtained based on the degree of trust.

Obtaining the information includes obtaining the information relating to the person only if the rating of trust for the person is greater than a predetermined rating. The rating

15

20

is obtained based on information about the person that has been provided by people on the trusted network and possibly other people that are not on the trusted network.

In another aspect, the invention features obtaining a referral via a computer-generated network of people who are linked to one another based on trust, and using the referral in a selection process.

This aspect of the invention may include one or more of the following. The selection process includes screening based on the referral. Screening includes screening potential candidates for a position, screening potential products for purchase/use, screening potential positions, screening potential investments, and/or screening potential services for purchase.

10

In another aspect, the invention features receiving information regarding types of messages that can be received via a trusted network of people, receiving a message via the trusted network of people, screening the message based on the information, and delivering the message if the message comports with the information.

This aspect may include one or more of the following.

The information regarding types of messages that can be received includes listening preferences which are provided via a computer-generated graphical user interface. The

types of messages are defined based on one or more of the following: a specific level on the trusted network, specific people on the trusted network, specific streams on the trusted network, and/or a subject matter of the message.

5 Other features and advantages will become apparent from the following description, drawings, and claims.

Brief Description of the Drawings

Figs. 1 to 3 depict information flow in a trusted 10 network of people.

Fig. 4 is a conceptual representation a trusted network of people.

Fig. 5 is a block diagram of computer network hardware on which an embodiment of the invention is implemented.

15 Fig. 6 is a flowchart showing a process for exchanging information over a trusted network of people.

Fig. 7 shows an alternative conceptual representation of the trusted network of people.

Fig. 8 is a flowchart showing a process for restricting 20 receipt of information from the trusted network of people.

Fig. 9 is a flowchart showing a process for obtaining a referral using the trusted network of people.

Figs. 10 to 52 show Web pages which depict an embodiment of the invention relating to employment.

Description

I. General Concept

20

Generally speaking, the invention is a computer program (or "system") that acts as a brokerage tool for bringing together parties, who are linked based on trust, and who want to fulfill a need through the exchange of goods and services. The system acts as both a referral "bank" and a referral "agent". In its role as a referral bank, the system holds and manages referrals, meaning information that users of the system would give if asked about a particular 10 subject (e.g., person, place, thing, etc.). In its role as a referral agent, the system circulates such information within an established network of people who are linked to one another based on trust, and distributes that information 15 to those in the network of people who have the desire and the right to receive it.

Networks of people are established by system users themselves, through a process of issuing referrals to, and requesting referrals from, those whom the users trust. For example, if A trusts B, and B trusts C, a trusted network may be established in the system which links A, B and C and, thus, currently-existing trusted networks of A, B and C. Through this trusted network, information is disseminated and accessed. Since the network is based on trusted

referrals, the information obtained through that network will be trusted by those on the network who receive it.

To become part of the system, a user registers via a device connected to a computer network, such as the Internet, and enters relevant information. The user sends requests for referrals to obtain access to another person's network of people (an inbound connection) and issues referrals to others to allow those others to obtain access to the user's network of people (an outbound connection). The former is referred to as an inbound connection because 10 it allows information to flow inward through the trusted network, meaning from others on the trusted network to the user. The latter is referred to as an outbound connection because it allows information to flow outward through the trusted network, meaning from the user to others on the trusted network. In this regard, information does not actually "flow" through the system. Rather, stored information is accessed from a database and routed, e.g., via electronic $mail_{k}$ based on stored connections between

The referrals can include information indicating a level of trust in a person's judgment (called "trusted judgment" or "connection") and a level of trust of the person with respect to a particular skill, professional

users in the trusted network.

20

competency, or the like (called "trusted content"). More specifically, trusted judgment applies to those people that the user trusts for their judgment on specific matters. For example, A may trust B's judgment in hiring technical people or in selecting doctors. Trusted content applies to those people that the user values for their particular skills. For example, A may value B's skills as a software engineer or as a general practitioner. Thus, there are two different questions to answer when issuing a referral: (i) given each person the user indicated as trusted, does the user believe that this person also has specific skills/competencies that the user values; and (ii) given a person that the user values for specific skills or competencies, does the user trust this person's judgment as well and, if the user trusts this person's judgment, in what respects and in what areas.

10

15

20

For a trusted link to be established between persons A and B, it sufficient that either A or B refer the other to the system as a trusted person. A trusted link can also be established between A and B if either of them indicates to the system that they trust the other's professional competency/skills. In this case, absent an indication of trusted judgment, a link is established between A and B only. A link based solely on professional competency/skills does not give A access to B's trusted network or vice versa.

A trusted link between A and B will be formed if the system knows either that A trusts B's judgment or that B trusts A's judgment. Only one of these two conditions is needed for A and B to be connected in a trusted network.

- 5 Although only one "trusted judgment" input is needed to establish a trusted link between two people, the person who entered the input will determine the direction of information flow through the network. By way of example, assume that A trusts B's judgment, but B does not trust A's judgment (the system does not collect and/or store "nontrust" information; therefore, if B does not trust A, B simply will not refer A to the system). In this case, information will flow through/from A to B, as shown in Fig.
- it will look for referrals tied to trusted networks for A and B. Referring to Fig. 2, if B trusts A, but A does not trust B, information will flow through B's network into A's network, as shown by the arrow in the figure. If A trusts B and B trusts A, information will flow in both directions -

This means that when the system is performing a query,

20 from A's network into B's network and from B's network into A's network. This contingency is shown in Fig. 3.

A. Referral Bank

5

15

20

Access to information in the system depends upon the trusted content and the trusted judgments stored in the system. By way of example, assume that A trusts B's judgment in investing and A would recommend B as a stock broker if somebody in A's trusted network needs a stock broker. Therefore, if somebody is looking for investment advice and is querying through A, the system will look in B's network (meaning, that the system will look at the referrals coming from B - the people B knows and would recommend if he were asked). The system looks in B's network because A has indicated that A trusts B's judgment in investing and because the original query has to do with investing. If someone were looking for a stock broker through A's network, the system would identify B, since A would recommend B as a stock broker.

In another example, assume that A values B as a stock broker, but A does not trust B's judgment in recommending commodities brokers. Therefore, if somebody in A's trusted network needs a stock broker, A will recommend B through the system. A does not actually do any "recommending"; this is done automatically by the system, without user intervention, since B is stored in the system as a referral of A.

However, if somebody in A's network is looking for a

commodities broker and is querying through A, the referrals coming from and through B will be ignored by the system.

This is because A has not indicated to the system that A trusts B's judgment in recommending commodities brokers.

5 In still another example, assume that A values B as a stock broker; A has not indicated that he trusts B's judgment with respect to doctors; but A does trust B's judgment in recommending commodities brokers. Therefore, (i) if somebody in A's trusted network needs a stock broker, 10 A will recommend B through the system (as noted previously, this is done automatically by the system, without user intervention, since B is stored as a referral of A); (ii) if somebody in A's trusted network is looking for a doctor and is querying through A, the referrals coming from and through 15 B will be ignored by the system, since A does not trust B's judgment with respect to doctors; and (iii) if somebody in A's trusted network is looking for a commodities broker and is querying through A, the system will look in B's network (meaning that the system will look at referrals coming from 20 and through B - the people B knows and would provide referrals for if asked), since A does trust B's judgment in recommending commodities brokers.

Thus, in this capacity, the system acts as a broker between one person who wants to buy goods and/or services

and another person who wants to sell goods and/or services. For example, a patient wishing to "buy" the services of a doctor may use the system, in particular the trusted links, to obtain a referral for a doctor. The patient thus uses the system to obtain a referral for a doctor in the system who is "selling" his services.

The system may also be used to obtain referrals based on the actions of those in the system whom the user trusts. For example, if person A is searching for a compact disc (CD), A may query through the trusted stream of another person B, whose taste in music the user trusts. In this context, "trusted stream" refers to the set of people connected by trusted links going out to the Nth (N>1) level of a trusted network, and corresponds to branches of a trusted network starting at a particular node (person).

10

15

20

In response to the query, recommendations for CDs may be obtained from B or those in B's trusted stream. In addition, the system may store, at each node of the trusted network, information indicating, for example, which CDs B and those in B's trusted stream have purchased recently.

Instead of, or in addition to, returning the recommendations of B and/or those in B's stream, the system may provide A with information indicating which CDs have been purchased by B and those in B's stream.

B. Referral Bank

20

In addition to providing access to referrals, information can be exchanged over a trusted network in several ways. For example, information can be transmitted by streamcasting, which means to transmit the information through one or more streams. Other activities relating to exchanging information over a trusted network include streamresearching, which includes looking for referrals (or other information, depending upon the specific application) 10 independently of previously-set listening preferences and previous queries; streamsearching (or querying), which allows users to search through specified streams for information; and backstreaming, which means to validate through people the user trusts the information and referrals 15 that the user received through people that trust the user. These functions allow users to disseminate and access information through trusted networks.

Users in a trusted network can set "listening preferences" to specify which information flowing through the network that they want to receive and, consequently, which information that they want to ignore. More specifically, the listening preferences allow a user to select which information to listen for, to specify those people in the user's immediate trusted network that the user

wants to hear from, and to choose from which level in a trusted network to receive information - from a first level to an entire trusted stream. In this context, a "level" of a trusted network refers to the number of people (i.e., network nodes) removed from the user in the network. For example, those directly connected to the user are said to be in the first level of the trusted network relative to the user. As noted above a, "trusted stream" refers to a branch of a trusted network starting at a particular node (person).

10

15

20

In the context of the present system, information transmissions through trusted networks do not require any action from users (network nodes). Users of the system "transmit" by virtue of being nodes in the system. As such, they are passive as to what is being transmitted; they do not initiate the activity of transmitting. By contrast, streamcasting is initiated by users. Individuals have the ability to streamcast as users of the system. Individuals streamcast when a message is initiated and sent by them to others on the system. Users can decide what levels of a trusted network to which the message should be sent. For those directly linked to the user, the user can also specify which of them will receive the message.

By way of example, Fig. 4 shows a trusted network containing persons A, B and C. Assume that A both trusts B

and values B as a stock broker. If C is looking for a stock broker, a query is transmitted through A and B without A and B even knowing it. If C is streamcasting a press release through A (e.g., to those on A's trusted network), the press 5 release gets transmitted to users linked to A or in A's stream and is delivered to those users 3 that have set the appropriate listening preferences. Person A will receive the message if his listening preferences comply with the message features (content/level sending or person sending) without any action on A's part.

10

15

20

Streamcasting can also be used to target advertising to users on the system who have their listening preferences set to receive such information. Advertising may be transmitted through a trusted stream based on the trusted links in that stream. For example, if A trusts B's judgment in purchasing automobiles, B may streamcast automobile advertisements through A's stream (provided the appropriate links have been established). Anyone in A's stream who has their listening preferences set to receive such information will receive the advertising. Because of the trusted nature of the links that define A's stream, those people on A's stream who receive the advertising (including A) will give the advertising more credence than "regular" advertising.

Thus, to summarize, individuals become users of the system by (i) registering, (ii) entering information about themselves, (iii) entering their trusted network and creating connections to the trusted network, and (iv) 5 setting their listening preferences. To create connections to a trusted network, the user: (i) specifies those people to whom the user has a direct connection; (ii) sets inbound connections by sending requests for referrals asking people to refer the user into their networks by entering trust/skill evaluation information in the system, and (iii) 10 sets outbound connections by referring people in the user's network to the system by entering trust/skill evaluation information into the system. In specifying listening preferences, the user is given three sets of variables from 15 which to select. These include: (i) for what information the individual is listening, (ii) from which level of the network the individual is listening for information, and (iii) from whom in the network the individual wants to receive information, Once the appropriate access and 20 settings have been set, information can be exchanged over the trusted network.

II. <u>Hardware And Software</u>

10

Referring to Fig. 5, a network system 10 is shown for implementing an embodiment of the invention. Network system, 10 includes a server 11, which communicates with computer 12 over computer network 15. Computer network 15 may be any private or public network, such as a local area network (LAN), a wide area network (WAN), or the Internet.

Computer 12 is a personal computer (PC) or any other type of processing device, such as a laptop computer, a hand-held computer, or a mainframe computer. Computer 12 includes input devices (not shown), such as a keyboard and a mouse, for inputting information and accessing data, and a display screen for viewing such data and other images.

Server 11 is a computer, such as a PC or a mainframe

computer, which executes a computer program to generate and traverse a trusted network of people (it is noted that a "trusted network" in the context of the present invention is an entirely different construct from network system 10 shown in Fig. 1 and that the two are unrelated except insofar as a trusted network is established and accessed via network system 10). View 16 shows the architecture of server 11.

The components of server 11 include a processor 17, such as a microprocessor or microcontroller, and a memory 19.

Memory 19 is a computer hard disk or other memory storage

device for storing a database 20 and computer programs 21.

Among the computer programs 21 stored in memory 19 are an Internet Protocol (IP) stack 22, for communicating over computer network 15, and engine 24. Engine 24 includes computer instructions that are executed by processor 17 to generate graphical user interfaces (GUIs), such as the Web pages described below, and to generate and traverse a trusted network of people.

Fig. 6 shows a process 25 for establishing a trusted

10 network of people and for using that trusted network to

exchange information among the people on the network. In

this embodiment, process 25 is performed by engine 24 based

on user inputs provided through computers, such as computer

12. The invention, however, is not limited to use in this

environment.

Process 25 begins by obtaining (or "harvesting") (601) referrals from "reviewers", meaning those issuing the referrals, and storing those referrals in database 20. What is meant by "referral" here is the trusted content and/or trusted judgment noted above. For example, a reviewer might believe that a subject (of the referral) provides reliable referrals on all topics. Alternatively, the reviewer might believe that the subject provides reliable referrals relating only to some topics, such as employment and movies,

20

but not to other topics, such as doctors. Referrals may be obtained by issuing (601a) requests to reviewers and receiving (601b) the referrals in response to the requests. Requests and responses are typically issued via electronic mail (e-mail) over network 15; however, other electronic or non-electronic transmission media may be used. Requests are issued (601a) at the behest of the subject of the referral. For example, the subject may request a referral from a reviewer by filling out a request form and transmitting that request to the reviewer via e-mail.

Process 25 links (602) people based on the referrals obtained in 201 to create a trusted network. There may be more than one link between two people on a trusted network if referrals exist between the two people that relate to different topics. Fig. 7 shows a representation of a trusted network 26. The representation shown is not actually stored; rather the relationships (i.e., the links) between nodes (people) on the network are stored. In particular, information is stored defining links between nodes on the trusted network. Process 25 links the people by traversing database 20 and defining associations between the nodes based on the referrals.

As noted above, a trusted network may contain several levels, defined here as a private trusted network, an

extended trusted network, and a global network. Taking person/node 27 as an example, private trusted network 28 for person 27 includes all those on network 26 to whom person 27 has a direct link (inbound and/or outbound), namely persons 29 to 32. The links in private trusted network 28 include those people about whom person 27 has provided a referral or have provided a referral for person 27. Thus, the links include those who person 27 trusts, either for their judgment or professional competency/skills.

Since person 27 has provided the system with referrals for persons 29 and 32, person 27 can transmit ("streamcast") queries and information to and through persons 29 and 32, but person 27 will not automatically receive information or queries through persons 29 and 32. Person 27 will receive information from, and through, persons 29 and 32 only if persons 29 and 32 trust person 27, have issued a referral to person 27, and links have been created and stored in the system which indicate that trust.

The extended trusted network 34 for person 27 includes
20 all those in person 27's private trusted network 28 and all
those who are linked to people in person 27's private
trusted network 28. For example, person 35 is in extended
trusted network 34, as are persons 36 to 45. Persons 36 to
45 are in person 27's extended trusted network because they

are links in various unbroken chains leading to person 27.

As noted, these links are established through the exchange of referrals by those on network 26.

Trusted streams are defined based on a single person's link to person 27. For example, person 32 constitutes the entry point to stream 33 relative to person 27.

A global network includes all people who are registered with server 11, together with data associated with each of those people. Thus, the global network includes all those on network 26 who are registered with the system.

10

15

20

Each person on network 26 may specify people on network 26 from whom messages can be received. This is done by specifying listening preferences (described above). By specifying listening preferences, a person can specify that messages are to be received from only people on the person's private trusted network, from a specific stream, or that only messages having specific content are to be received.

Process 25 receives (603) such data specifying listening preferences from people on network 26, e.g., during a registration process, and stores the data at the appropriate node of network 26. In 603, process 25 may also receive other data, such as a personal profile of the user including educational history, skills, and employment

history, and other information specific to the user. Uses for such information are described below.

The data of 603 may be used when process 25 exchanges (604) information via network 26. For example, a person 27 on network 26 may transmit a message to all those on his private trusted network 28. The message is then routed (e.g., by e-mail) to all those on private trusted network 28. Whether the message will be delivered to a person on private trusted network 28 is determined by that person's 10 listening preferences. If a person's listening preferences indicate that he will not accept a particular message, that message is not delivered to that person. Actual transmission and delivery of the messages "through" network 26 is performed by the system, which retrieves the e-mail 15 addresses of all those linked directly (for private trusted network transmission) and/or indirectly (for extended trusted network transmission) to person 27 and forwards the message to those e-mail addresses.

Fig. 8 shows a process 47 that is used by person 27 on network 26 to restrict receipt of messages from other people on network 26. Process 47 may be implemented in engine 24 in connection with appropriate software on computer 12.

Process 47 begins with person 27 providing (801) information identifying which types of messages that person

27 wants to receive. This is typically done by selecting listening preferences on a GUI, such as a Web page output by server 11. Process 47 receives (802) a message directed to person 27 over network 26. Process 47 screens (803) the message to determine if the message is of the type that person 27 wants to receive. For example, person 27 may want to receive messages relating to particular topics, such as employment opportunities. In this case, process 47 screens (803) the message to determine if it relates to such a topic. Alternatively, person 27 may want to receive messages based where those messages were transmitted from in network 26. For example, person 27 may want to receive messages from those people on his private trusted network 28, but not from other people. In this case, process 47 15 screens (803) the message to determine if it came from someone on person 27's private trusted network 28. If the message comports with the type of message that person 27 wants to receive (804), process 47 delivers (805) the message to person 27's computer. Otherwise, process 47 20 ignores (806) the message, meaning that it does not deliver the message to person 27.

Trusted network 26 may be used to distribute information to its members/nodes. Such information may include, for example, targeted advertising, information

relating to employment opportunities, investment advice, news clips, or any other type of announcement. Whether this information is actually delivered to those on network 26 depends on the listening preferences set by those members.

To distribute information, a member of network 26 need merely specify people and/or subnetworks to receive the information. For example, information may be streamcast to a particular stream of private trusted network 28.

Fig. 9 shows a process 50 for obtaining referrals using network 26. Process 50 may be implemented, at least in part, in engine 24. As noted, a referral may relate to any subject matter. For example, it may relate to a candidate for a position, a doctor, a movie, investment advice, or anything else about which a person wants a referral and for which information is available via network 26.

A referral is obtained (901) by querying database 20.

Referrals are obtained by retrieving stored referrals from people on a private trusted network or an extended trusted network. For example, each person on extended trusted

20 network 34 may store a referral for a doctor. Since extended trusted network 34 is based on trust between people on the network, if person 27 is searching for a doctor, person 27 can retrieve referrals for doctors via the system.

For example, assume that person 27 trusts person 29's

judgment with respect to referring doctors and that person 29 has a referral to person 43, who is a doctor. In 901, the system goes from person 27, through person 29, to obtain a referral for person 43. The system then provides person 29 with an indication that person 43 is a "referred" doctor. Of course, referrals obtained in 901 can be more complicated than this, and include, but are not limited to, all of the examples set forth in the "General Concept" section above.

The referral obtained in 901 may be used as part of a 10 broader selection process (902). The selection process may include screening a person based on the referral. For example, if the referral is for a candidate for a position, the selection process will include screening the candidate; if the referral is for a position at a company, the 15 selection process will include screening the position; if the referral relates to investments, the selection process will include screening the investments; if the referral relates to potential products or services for purchase/use, the selection process will include screening the potential 20 products or service providers; and so on. The screening process may take into account various factors and is performed "off-line" based on referrals and/or information obtained via process 50.

III. "Employment" Embodiment

The following describes an embodiment of the invention for use in an employment context. Initially, the user registers with the system via a registration page 50 (Fig.

- 10). Registration page 50 includes entries for the user's first name 51, last name 52, e-mail address 53, user-supplied password 54, password confirmation 55, and a challenge question 56 and response 57. Clicking on register button 59 registers the user with they system. Upon registration, the user receives a system-generated private
- registration, the user receives a system-generated private identifier (ID), which identifies the user to the system.

 The user enters the system through login page 60 (Fig. 11) by entering the private ID 61 and password 62.

From there, the system displays menus 64 (Fig. 12) for selecting various options. These options correspond to functions available via engine 24. A description of the menus and options is as follows.

Profile menu 65 displays options 67 to 69. Option 65 ("My Contact Information") displays Web page 70 (Fig. 13).

20 A user provides contact information to server 11 via Web page 70. This contact information includes the user's address 71, e-mail address 72, primary phone number 73, secondary phone number 74, and facsimile number 75. An option 76 is also provided for allowing server 11 to share

one or more elements of the user's contact information with others on the user's private inbound network. The user's contact information is transmitted from computer 12 to server 11. The information is stored in association with the user's private ID in database 20. Update button 77 updates the user's contact information in the system.

Web page 70 also displays a list 79 of those people on the user's private trusted network, along with information indicating whether the people listed are on the user's inbound 80 or outbound 81 trusted network. List 79 includes the name 82 of each person on the user's private trusted network. Add button 84 allows the user to add people to his private trusted network. List 79 is included on many of the Web pages shown below and, therefore, is noted here only.

10

Option 68 ("Desired Job") provides server 11 with information about a job that the user is seeking. Option 68 displays Web page 85 (Fig. 14). On Web page 85, box 86 indicates the position/function that the user is seeking. Box 87 indicates the level at which the user wishes to enter an organization. Boxes 88 to 90 indicate the user's willingness to move and date of move. Box 91 indicates the maximum number of miles the user is willing to commute based on the user's zip code. Box 92 is reserved for comments regarding the type of job desired by the user. Box 93

indicates the number of years that the user has been in a specific industry. Box 94 indicates the type of company at which the user wants to work, meaning one in the prefunding stage, in the funded stage, in the about to IPO ("Initial 5 Public Offering") stage, or in the post IPO stage. Share boxes 95 indicate whether the user has authorized server 11 to make corresponding information available to companies (i.e., potential employers) on the system. Share boxes 96 indicate whether the user has authorized server 11 to make the information available to those on the user's private inbound network. Check boxes 97 and 98 indicate whether the user is currently listening for full-time jobs or consulting jobs, respectively.

10

Option 69 ("My Background") displays Web page 99 (Fig. 15). Web page 99 shows background information regarding the 15 user's professional profile, including employment history 100, education 101, and skills 102. For each company 104, employment history 100 includes dates of employ 105, level 106 (meaning position), functional area 107, and title 108 of the user. Education 101 lists schools the user attended, 20 among other things, and skills 102, lists the users skills. Option 110 allows the user to share the background information with those on the user's private inbound

network. Option 111 allows the user to share the background information with companies on the system.

Hyperlink 112 allows the user to edit their employment history. Clicking on hyperlink 112 displays Web page 113 (Fig. 16). Web page 113 allows the user to edit the information shown, to add an employment record via button 114, or to add a leave of absence via button 115. Web page 113 indicates whether the information can be shared with those on the user's private inbound network 117 or to 10 companies 119 registered with the system.

5

To change an employment record via Web page 113, the user clicks on a hyperlink, such as 120, that corresponds to a company name. This displays Web page 121 (Fig. 17). Web page 121 includes options for changing/entering the company name 122, address 123, start date 124, end date 125, primary 15 function 126, secondary function 127, level 128, title 129, and comments 130. Options 131 allow the user to select whether the information can be shared with those on the user's private inbound network or to companies registered 20 with the system. Clicking on update button 132 updates this information on Web page 113 (Fig. 16). Cancel button 133 cancels the current action; and delete button 134 deletes newly-entered information.

Clicking on hyperlink 135 (from any of Web pages 99, 113 or 121) displays Web page 136 (Fig. 18). Web page 136 allows the user to edit their education history. Add button 137 allows the user to add additional education information.

Web page 136 displays educational history information which includes the university 140 that the user attended, degree awarded 141, major 142, and indications 145 and 146 as to whether this information can be shared with those on the user's private inbound network and/or companies registered with the system. Clicking add button 137 or on on a hyperlink 149 that corresponds to university attended displays Web page 150 (Fig. 19).

5

10

15

20

Web page 150 allows the user to edit/add educational information, including school name 151, address 152, major 153, degree 154, begin date 155, end date 156, graduation information 157, minor 158, honors 159, GPA (grade point average) 160, and comments 161. Options 162 allow the user to select whether the information can be shared with those on the user's private inbound network or to companies registered with the system. Clicking on update button 164 updates this information on Web page 136 (Fig. 18). Cancel button 165 cancels the current action.

Clicking on hyperlink 166 (from any Web page) displays Web page 170 (Fig. 20). Web page 170 allows the user to

edit their current skills 171. Add button 172 allows users to add a new skill; remove button 173 allows users to remove an existing skill; and save button 174 allows users to save new skill settings. Options 175, 176 and 177 provide different ways for a user to add a new skill to their current skills 171.

More specifically, option 175 allows users to enter skills manually. Option 176 allows users to choose skills by category. Clicking on the button corresponding to option 176 displays Web page 180 (Fig. 21). Web page 180 allows 10 users to select skills from category set 181. Add button 182 adds skills from category set 181 to selected skills set 184. Clear button 185 clears a selected skill from selected skills set 184 and save button 186 saves a new selected skill set. Referring back to Fig. 20, clicking on the 15 button that corresponds to option 177 displays Web page 190 (Fig. 22). Web page 190 allows users to select from an alphabetized skill list. The functions of add button 191, clear button 192, and save button 193 are the same as their 20 counterparts in Fig. 21.

Referring back to Fig. 12, menu option 200 includes three options: "My Peoplestream Network" 201, "Get Connected" 202, and "Message History" 203.

Clicking on "My Peoplestream Network" 201 displays

Web page 204 (Fig. 23). Web page 204 includes a list 205 of all those people on the user's private trusted network. people are listed by name 206 and include information indicating whether there is an outbound connection 207 5 between the user to the person listed, and information indicating whether there is an inbound connection 208 between the user and the person listed. People, such as person 209, who have no established inbound or outbound connection, but who have been invited to join the system by the user, may also be listed on Web page 204. Other information listed for each person includes the user's rating of each person's professional competency 210, whether the user trusts each person's judgment 211, if a contact has been disabled 212 between the user and the person, and the 15 last message 213 exchanged between the user and the person Information (not shown) may also be provided which listed. indicates whether the person listed belongs to the user's "Core network" here refers to preferred core network. nodes/people in a user's private trusted network with which the user exchanges information. The core network may be 20 specified beforehand and may be used to send information to/receive information from specific trusted streams. A person need not specify a core network.

Add button 215 on Web page 204 displays Web page 216 (Fig. 24). Through Web page 216, the user can enter a referral for a person. The one entering the referral should have the private ID of the subject of the referral. The private ID is obtained from this person, who has sole access to the private ID. The referral includes this private ID 217 and other information, such as the name 218 of the subject, a (subjective) professional competency assessment 219 selected via a pull-down bar 220, an indication 221 of whether the user trusts the person's judgment of others, an indication 222 of whether the reviewer worked with the subject, the duration of time 223 that the reviewer worked with the subject, the relationship 224 between the reviewer and the subject, an indication 225 of whether the user would like to share his profile with the person, a comments 15 section 226, and a hyperlink 226 for viewing professional information of the person (A BHAMMAR). As shown, pull-down bar 220 lists different degrees of trust in the person's professional competency. The user can select from these options, which then stores the data in database 20.

Referring back to Fig. 12, "Get Connected" option 202 displays Web page 230 (Fig. 25). Web page 230 allows the user to send an e-mail requesting the recipient to register with the system. The e-mail includes a message 231

20

instructing the recipient as to how to proceed, along with the user's private ID 232. This information is needed for the recipient to establish connection to the user's trusted network.

5

10

15

20

"Message History" option 203 allows the user to obtain information about messages from Web page 240 (Fig. 26), such as invitations to join the system, that the user has sent. This information includes the identity 241 of the person to whom the message was sent, the date 242 that the message was sent, and the "type" 243 of the message, e.g., e-mail. Clicking on a hyperlink 244 from Web page 240 displays Web page 245 (Fig. 27). Web page 245 displays the content of the message, in addition to the information noted above.

Referring back to Fig. 12, clicking on listening center menu 247 gives the user access to listening center options provided through server 11. Generally speaking, these options allow the user to determine which messages to listen for and which contacts to disable.

Clicking on listening preferences option 248 displays Web page 249 (Fig. 28). Generally speaking, listening preferences include (i) what information the individual is listening for, and (ii) from which level of the network the individual is listening for information. There are three groups individual users can listen to: (i) private trusted

network, meaning people to whom the individual has a direct link, (ii) stream, meaning people who are indirectly linked to the individual (this may be limited to corporate users or "hiring managers"), and (iii) the system proprietor, in this case, Peoplestream.com. There are three types of messages individual users can listen for. These include information from/about companies, such as press releases and job information, Peoplestream.com news and information, and personal information from other individual users on the network.

10

Web page 249 allows the user to select which messages to receive. Server 11 routes these messages to users based on their listening preferences provided that the users are in the appropriate stream and meet the necessary requirements. For example, a user may select to listen to 15 his private inbound network 250 and/or from his inbound streams 251 (including the private inbound network and those linked to the user's private inbound network). The user can set listening preferences to listen for streamcast messages, 20 including messages from the user's private inbound network 253 and press releases 254. The user can set listening preferences to listen for streamsearch messages 255, including messages relating to full-time career opportunities 256, consulting job career opportunities 257,

and advice 258. In addition, the user can set listening preferences to listen for messages from the system administrator, in this case Peoplestream.com. These listening preferences include information pertaining to new companies 260, companies receiving new funding 261, and changes in company status 262.

Those messages that the user wants to receive (as set in the listening preferences) are routed to the user via email by virtue of the links among people that define trusted network 26. Messages that the user does not want to receive are ignored in that they are not routed to the user.

10

Referring back to Fig. 12, clicking on disable contact option 264 displays Web page 265 (Fig. 29). Web page 265 allows the user to disable a connection to another person in the user's private trusted network. As noted above, messages are routed based on associations between people on the user's network. If a contact (i.e., a person) on that network is disabled, this means that the user will no longer accept messages routed through that contact.

The user can specify which contact to disable by clicking on Add button 266, which displays Web page 267 (Fig. 30). There, the user can enter a private ID 269 corresponding to a link in the user's private trusted network that the user wants to disable. Comments 270 may

also be entered regarding the link. Web page 273 (Fig. 31) can be accessed via hyperlink 272 on Web page 267. There, the user can disable company contacts. For each e-mail, the system gives its users the option to disable whoever sent the e-mail.

Referring back to Fig 12, selecting company pipeline & research menu 275 provides ways for a user to get information about, and evaluate, a company registered with server 11. Company Pipeline & Research Menu 275 provides the user with options 276 to 278.

10

Pipeline option 276 displays a Web page 277 (Fig. 32) that lists companies registered with server 11 to which the user is positively associated (e.g., through links in the user's trusted network) and with which the user has had some relationship/activity. Pipeline option 277 provides information indicating job openings (levels) 279 at a listed company 280 and an area 281 for notes/comments. Clicking on hyperlink 282 displays Web page 284 (Fig. 33). Web page 284 allows the user to add a new company to the user's pipeline.

This is done by entering the company in box 286, the location 287 of the company, and/or a relevant industry 290.

Referring back to Fig. 32, clicking on hyperlink 290 displays Web page 291 (Fig. 34). Web page 291 displays the user's activities with a particular company listed in the

user's pipeline. These activities may include, for example, hiring activities, such as interviews, receipt of an offer for employment, rejections, etc.

Referring back to Fig. 12, streamresearch option 277

5 displays Web page 300 (Fig. 35). Web page 300 shows a list of companies 301 that have job openings 302, that the user is positively associated to, and that belong to the user's trusted referral network. Messages may be sent to the hiring manager(s) of these companies. For example, by clicking on "Send Profile" button 304, users can send their information, such as that shown in Web page 99 (Fig. 15), to one or more companies selected in boxes 305.

Referring back to Fig. 12, discovery option 278 displays a Web page 307 (Fig. 36) that includes a list 308a of companies registered with server 11 with a brief description of each. Clicking on a hyperlink 309a that corresponds to a name of a company provides additional information about the company (Fig. 37). Discovery page 307 includes: "Company Search" 308 and "Job Search" 309.

Clicking on "Company Search" link 308 displays Web page 310 (Fig. 38). From there, the user can search for companies registered with the system as noted above.

Clicking on "Job Search" link 309 displays Web page 312

(Fig. 39). Web page 312 lists companies 313 that have job

20

openings 314 that correspond to the information input by the user in Web page 85 (Fig. 14). More specifically, as shown in Fig. 14, the user input "software engineer" as a desired job in Web page 85. Web page 32 therefore displays

5 companies 313 registered with the system that have jobs 316 that correspond to the user's initial search criteria (in this case, "software engineer").

As noted above, Fig. 37 (Web page 320) displays information for companies listed on Web page 307 (Fig. 36) 10 The information is shown in the figure; however additional information may be displayed if desired. Web page 320 also displays two buttons: backstream and genealogy. Referring to Fig. 40, genealogy 321 displays company history and associations with respect to employees 322, founders 323, key hires 324 investors 325, board members 326, competitors, 15 and/or targets (these last two options are available for corporate users only). Backstream 327 allows users to determine if there is a trusted connection from the user back to a company via the user's trusted network. Clicking 20 on Backstream button 327 displays Web page 330 (Fig. 41). Web page 330 allows the user to determine if there is a backstream to employees 331, founders 332, key hires 333, investors 334, and/or board members 335 of company 309. The position of each person within the company is stored in

database 20 with server 11. The user can send their profile to company 309 via "Send Profile" button 340.

Referring back to Fig. 12, "Streamsearch & Streamcast Tools" option 341 provides options for issuing queries

5 through the system to search for people to fill a position and/or to search for advice. In this embodiment,

"Streamsearch & Streamcast Tools" option 341 is used by hiring managers (corporate users) only; however, the invention is not limited as such. Streamsearch option 342

10 displays Web page 344 (Fig. 42). Web page 344 includes options for entering a job description ("Job (Full Time)" hyperlink 345), for entering a consulting services description ("Consulting Services" hyperlink 346), and for entering an advice description ("Advice" hyperlink 347).

- Clicking on hyperlink 345 displays Web page 350 (Fig. 43) Web page 350 shows (in this case, the hiring manager) current job descriptions in the system. A job description includes job title 351 (e.g., Internet Engineer) and functional area 352 (e.g., Software Engineering).
- Information is also provided which indicates when the job description was modified 353, by whom it was modified 354, and whether the job is currently open 355. Clicking on Add button 356 allows the user to enter a new job description into the system via Web page 358 (Fig. 44). Web page 358

may also be displayed to edit an existing job description by clicking on a hyperlink (e.g., 359) that corresponds to the job description. As shown, Web page 358 allows the user to edit/add a description of the job 360 and candidate requirements 361.

Web page 350 also keeps track of queries (also called "streamsearches") 365 that have been run, when they were last run 366, by whom such queries were last modified 367, and the results 368 of the queries.

Clicking on add button 369 displays Web page 370 (Fig. 45). Web page 370 allows the user to set up a streamsearch through database 20 and/or trusted network 26 or any subnetwork thereof for the information specified in Web page 370. For example, the user can define a streamsearch (i.e., "query") to search for a candidate for a position. In Web page 370, the user specifies a start person 371 (meaning a person in the user's private trusted network in which to start the query), the job 372 to be filled, the name 373 of the streamsearch, and how often (scheduling 374) the

The user may also specify filters for the search.

These filters, which operate in engine 24, match candidates based on specified criteria. For example, "match required skills" option 375 requires that the skills of the candidate

(on Web page 99 of Fig. 15) match one or more of those of the job description (Web page 358 of Fig. 44). Options are also provided for including candidates that have already been contacted by the system 376 and for including candidates that have previously been excluded 377.

Ratings filter 380 excludes candidates based on ratings for the candidates. These ratings are determined based on the degree of trust in a person's professional competency (option 219 of Web page 216 in Fig. 24). The rating of a person may be determined by processing, e.g., averaging, the degrees of trust input by all people on the global network of the system. This is called the "global rating".

Alternatively, the rating may be determined by processing, e.g., averaging, the degree of trust input by only people on the user's trusted network. This is called the "local rating". Either rating determination method may be used.

The system searches through the trusted stream starting with start person 371 based on the rating specified in filter 380. That is, the system looks for referrals through the trusted to those people who have a rating the same as, or higher than, the rating input in 380.

20

Results Web page 390 (Fig. 46) displays the results of the streamsearch input on Web page 370. The information returned includes the rating 391 of each candidate, the

current title 392 of the candidate, the number of years of experience 393 that the candidate has, and the candidate's prior companies 394. A check box 395 is also provided to indicate whether the candidate will be contacted.

5

10

20

Figs 47 and 48 show Web pages 400 and 401 that correspond to Web page 350. Web pages 400 and 401 relate to obtaining candidates for consulting jobs and advice on a selected topic via the system. The actions performed with respect to Web pages 400 and 401 are analogous to those performed with respect to Web page 350.

Referring back to Fig. 12, "Streamcast" option 410 displays Web page 411 (Fig. 49). Web page 411 displays messages to be streamcast over one or more of the user's trusted streams. Clicking on hyperlink 412 displays Web page 413 (Fig. 50), which show the contents of the message streamcast by the user. In this example, the message is a press release; however, other messages may be streamcast, such as the targeted advertising described above. No content for the press release is shown in Fig. 50.

Referring back to Fig. 12, clicking on "Candidate Pipeline" option 420 displays Web page 421 (Fig. 51). Web page 421 displays a list of candidates (e.g., potential hires) who have responded to queries from the user (in this case, the hiring manager). Clicking on hyperlink 422

displays Web page 423 (Fig. 52). Web page 423 displays history information for candidates specified in Web page 421. In particular, Web page 423 displays information in notes section 424 indicating activity between the candidate and a company represented by the user.

5

of the invention. The invention, however, is not limited to the embodiment shown. Moreover, the invention is not limited to use with the particular hardware/software

10 configuration of Fig. 5; it may find applicability in any computing or processing environment. The invention may be implemented in computer programs executing on programmable computers that each includes a processor, a storage medium readable by the processor (including volatile and non-volatile memory and/or storage elements), at least one input device, and one or more output devices. Program code may be applied to data entered using an input device to perform the processes described above and/or to generate output

20 Each such program may be implemented in a high level procedural or object-oriented programming language to communicate with a computer system. However, the programs can be implemented in assembly or machine language. The language may be a compiled or an interpreted language.

information, such as Web pages, for display.

Each computer program may be stored on a storage medium or device (e.g., CD-ROM, hard disk, or magnetic diskette) that is readable by a general or special purpose programmable computer for configuring and operating the computer when the storage medium or device is read by the computer to perform the processes described above. The invention may also be implemented as a computer-readable storage medium, configured with a computer program, where, upon execution, instructions in the computer program cause the computer to operate in accordance with the processes and the Web pages described above.

Other embodiments not described herein are also within the scope of the following claims.

What is claimed is:

10

1. A method comprising:

obtaining trusted referrals from people;

linking at least some of the people based on the trusted referrals to create a trusted network on a computer; and

using information on the trusted network.

2. The method of claim 1, wherein obtaining comprises receiving the referrals in response to requests.

10

5

- 3. The method of claim 1, wherein linking comprises storing relationships between at least some of the people that define at least a portion of the trusted network.
- 15 4. The method of claim 1, wherein:

each person on the trusted network comprises a node of the trusted network; and

the method further comprises storing information in association with nodes of the trusted network.

20

5. The method of claim 4, wherein the information relates to a person corresponding to a node of the trusted network.

6. The method of claim 5, wherein the information comprises an assessment relating to competency of the person corresponding to the node.

- 7. The method of claim 1, wherein using the information comprises sending an electronic mail (e-mail) message to one or more of the people on the trusted network.
- 8. The method of claim 7, wherein the e-mail message
 10 is delivered to the one or more people based on settings for
 the one or more people and based on links in the trusted
 network.
- 9. The method of claim 8, wherein the settings
 15 comprise listening preferences that define which e-mail
 messages a person on the trusted network wants to receive.
 - 10. The method of claim 7, wherein:

the trusted referrals relate to products and/or

20 services for sale; and

the e-mail message includes advertising that is targeted to the one or more people and that relates to the products and/or services for sale.

11. The message of claim 1, wherein the information comprises a referral relating to a person, place or thing.

- 12. The method of claim 1, wherein using the
 5 information comprises a buyer and a seller on the trusted network exchanging information relating to products and/or services for sale over the trusted network.
- 13. The method of claim 1, wherein the information 10 comprises customer referrals for goods and/or services.
 - 14. The method of claim 1, further comprising obtaining data about a person on the trusted network of people;
- wherein using the information comprises matching the person to a position based on the data about the person.
- 15. The method of claim 14, wherein the data comprises background information for the person and a desired20 position.
 - 16. The method of claim 15, wherein the background information comprises a personal profile that includes one

or more of educational history, employment history, and skills of the person.

- 17. The method of claim 1, wherein the trusted
 5 referrals comprise trust in judgment and/or trust in professional competency/skills.
 - 18. The method of claim 1, wherein:
- at least one of the trusted referrals includes

 information relating to a degree of trust; and

 using the information comprises obtaining information

 relating to one or more of the people via the trusted

 network based on the degree of trust.
- 15 19. The method of claim 18, further comprising obtaining a rating of trust for a person on the trusted network based on the degree of trust;

20

wherein obtaining the information comprises obtaining the information relating to the person only if the rating of trust for the person is greater than a predetermined rating.

20. The method of claim 19, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network.

21. The method of claim 19, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network and other people that are not on the trusted network.

- 22. The method of claim 18, wherein the degree of trust comprises an assessment of the professional competency of a person who is the subject of the at least one trusted referral.
 - 23. A method comprising:

10

15

obtaining a referral via a computer-generated network of people who are linked to one another based on trust; and using the referral in a selection process.

- 24. The method of claim 23, wherein the selection process comprises screening based on the referral.
- 20 25. The method of claim 23, wherein screening comprises screening potential candidates for a position.
 - 26. The method of claim 23, wherein screening comprises screening potential products for purchase/use.

27. The method of claim 23, wherein screening comprises screening potential positions.

- 5 28. The method of claim 23, wherein screening comprises screening potential investments.
 - 29. The method of claim 23, wherein screening comprises screening potential services for purchase.

10

30. A method comprising:

receiving information regarding types of messages that can be received via a trusted network of people;

receiving a message via the trusted network of people;

screening the message based on the information; and
delivering the message if the message comports with the information.

31. The method of claim 30, wherein the information regarding types of messages that can be received comprises listening preferences which are provided via a computergenerated graphical user interface.

32. The method of claim 31, wherein the types of messages are defined based on one or more of the following: a specific level on the trusted network, specific people on the trusted network, and/or specific streams on the trusted network.

- 33. The method of claim 31, wherein the types of messages are defined by a subject matter of the message.
- 10 34. A computer program stored on a computer-readable medium, the computer program comprising executable instructions that cause a computer to:

obtain trusted referrals from people;

link at least some of the people based on the trusted

15 referrals to create a trusted network on a computer; and

use information on the trusted network.

- 35. The computer program of claim 34, wherein obtaining comprises receiving the referrals in response to 20 requests.
 - 36. The computer program of claim 34, wherein linking comprises storing relationships between at least some of the

people that define at least a portion of the trusted network.

37. The computer program of claim 34, wherein:

each person on the trusted network comprises a node of the trusted network; and

the computer program further comprises instructions to store information in association with nodes of the trusted network.

10

5

- 38. The computer program of claim 37, wherein the information relates to a person corresponding to a node of the trusted network.
- 39. The computer program of claim 38, wherein the information comprises an assessment relating to competency of the person corresponding to the node.
- 40. The computer program of claim 34, wherein using 20 the information comprises sending an electronic mail (email) message to one or more of the people on the trusted network.

41. The computer program of claim 40, wherein the email message is delivered to the one or more people based on settings for the one or more people and based on links in the trusted network.

5

42. The computer program of claim 41, wherein the settings comprise listening preferences that define which email messages a person on the trusted network wants to receive.

10

43. The computer program of claim 40, wherein: the trusted referrals relate to products and/or services for sale; and

the e-mail message includes advertising that is

15 targeted to the one or more people and that relates to the
products and/or services for sale.

44. The message of claim 34, wherein the information comprises a referral relating to a person, place or thing.

20

45. The computer program of claim 34, wherein using the information comprises a buyer and a seller on the trusted network exchanging information relating to products and/or services for sale over the trusted network.

46. The computer program of claim 34, wherein the information comprises customer referrals for goods and/or services.

5

47. The computer program of claim 34, further comprising instructions to obtain data about a person on the trusted network of people;

wherein using the information comprises matching the person to a position based on the data about the person.

48. The computer program of claim 47, wherein the data comprises background information for the person and a desired position.

15

49. The computer program of claim 48, wherein the background information comprises a personal profile that includes one or more of educational history, employment history, and skills of the person.

20

50. The computer program of claim 34, wherein the trusted referrals comprise trust in judgment and/or trust in professional competency/skills.

51. The computer program of claim 34, wherein:

at least one of the trusted referrals includes

information relating to a degree of trust; and

using the information comprises obtaining information

relating to one or more of the people via the trusted

network based on the degree of trust.

- 52. The computer program of claim 51, further comprising instructions to obtain a rating of trust for a person on the trusted network based on the degree of trust; wherein obtaining the information comprises obtaining the information relating to the person only if the rating of trust for the person is greater than a predetermined rating.
- 15 53. The computer program of claim 52, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network.
- 54. The computer program of claim 52, wherein the
 20 rating is obtained based on information about the person
 that has been provided by people on the trusted network and
 other people that are not on the trusted network.

55. The computer program of claim 51, wherein the degree of trust comprises an assessment of the professional competency of a person who is the subject of the at least one trusted referral.

5

56. A computer program stored on a computer-readable medium, the computer program comprising executable instructions that cause a computer to:

receive information regarding types of messages that

10 can be received via a trusted network of people;

receive a message via the trusted network of people; screen the message based on the information; and deliver the message if the message comports with the information.

15

57. The computer program of claim 56, wherein the information regarding types of messages that can be received comprises listening preferences which are provided via a computer-generated graphical user interface.

20

58. The computer program of claim 57, wherein the types of messages are defined based on one or more of the following: a specific level on the trusted network, specific

people on the trusted network, and/or specific streams on the trusted network.

- 59. The computer program of claim 57, wherein the types of messages are defined by a subject matter of the message.
 - 60. An apparatus comprising
 - a memory which stores executable instructions; and
- 10 a processor which executes the instructions to:

obtain trusted referrals from people;

link at least some of the people based on the trusted referrals to create a trusted network in memory; and

- use information on the trusted network.
 - 61. The apparatus of claim 60, wherein obtaining comprises receiving the referrals in response to requests.
- 20 62. The apparatus of claim 60, wherein linking comprises storing relationships between at least some of the people that define at least a portion of the trusted network.

63. The apparatus of claim 60, wherein:

each person on the trusted network comprises a node of the trusted network; and

the apparatus further executes instructions to store information in association with nodes of the trusted network.

- 64. The apparatus of claim 63, wherein the information relates to a person corresponding to a node of the trusted 10 network.
 - 65. The apparatus of claim 64, wherein the information comprises an assessment relating to competency of the person corresponding to the node.

15

- 66. The apparatus of claim 60, wherein using the information comprises sending an electronic mail (e-mail) message to one or more of the people on the trusted network.
- 20 67. The apparatus of claim 66, wherein the e-mail message is delivered to the one or more people based on settings for the one or more people and based on links in the trusted network.

68. The apparatus of claim 67, wherein the settings comprise listening preferences that define which e-mail messages a person on the trusted network wants to receive.

5 69. The apparatus of claim 66, wherein:
the trusted referrals relate to products and/or services for sale; and

the e-mail message includes advertising that is targeted to the one or more people and that relates to the products and/or services for sale.

- 70. The message of claim 60, wherein the information comprises a referral relating to a person, place or thing.
- 15 71. The apparatus of claim 60, wherein using the information comprises a buyer and a seller on the trusted network exchanging information relating to products and/or services for sale over the trusted network.
- 20 72. The apparatus of claim 60, wherein the information comprises customer referrals for goods and/or services.

73. The apparatus of claim 60, further comprising instructions to obtain data about a person on the trusted network of people;

wherein using the information comprises matching the person to a position based on the data about the person.

74. The apparatus of claim 73, wherein the data comprises background information for the person and a desired position.

10

75. The apparatus of claim 74, wherein the background information comprises a personal profile that includes one or more of educational history, employment history, and skills of the person.

15

76. The apparatus of claim 60, wherein the trusted referrals comprise trust in judgment and/or trust in professional competency/skills.

20

77. The apparatus of claim 60, wherein:

at least one of the trusted referrals includes
information relating to a degree of trust; and

using the information comprises obtaining information relating to one or more of the people via the trusted network based on the degree of trust.

5 78. The apparatus of claim 77, further comprising instructions to obtain a rating of trust for a person on the trusted network based on the degree of trust;

wherein obtaining the information comprises obtaining the information relating to the person only if the rating of trust for the person is greater than a predetermined rating.

79. The apparatus of claim 78, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network.

15

10

80. The apparatus of claim 78, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network and other people that are not on the trusted network.

20

81. The apparatus of claim 77, wherein the degree of trust comprises an assessment of the professional competency of a person who is the subject of the at least one trusted referral.

using the information comprises obtaining information relating to one or more of the people via the trusted network based on the degree of trust.

78. The apparatus of claim 77, further comprising instructions to obtain a rating of trust for a person on the trusted network based on the degree of trust;

wherein obtaining the information comprises obtaining the information relating to the person only if the rating of trust for the person is greater than a predetermined rating.

79. The apparatus of claim 78, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network.

15

5

80. The apparatus of claim 78, wherein the rating is obtained based on information about the person that has been provided by people on the trusted network and other people that are not on the trusted network.

20

81. The apparatus of claim 77, wherein the degree of trust comprises an assessment of the professional competency of a person who is the subject of the at least one trusted referral.

82. An apparatus comprising:

5

- a memory which stores executable instructions; and
- a processor which executes the instructions to:

receive information regarding types of messages that can be received via a trusted network of people;

receive a message via the trusted network of people;

screen the message based on the information; and deliver the message if the message comports with the information.

- 83. The apparatus of claim 82, wherein the information regarding types of messages that can be received comprises

 15 listening preferences which are provided via a computergenerated graphical user interface.
- 84. The apparatus of claim 83, wherein the types of messages are defined based on one or more of the following:

 20 a specific level on the trusted network, specific people on the trusted network, and/or specific streams on the trusted network.

85. The apparatus of claim 84, wherein the types of messages are defined by a subject matter of the message.

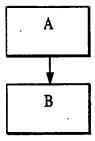


FIG. 1

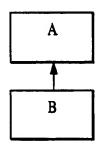


FIG. 2

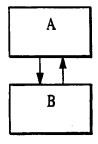


FIG. 3

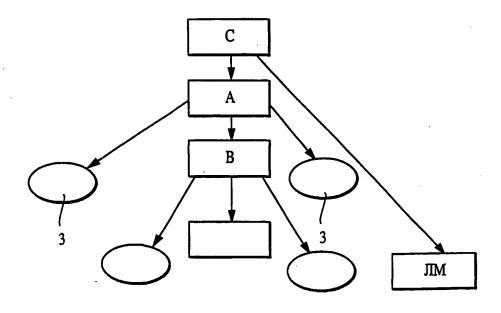
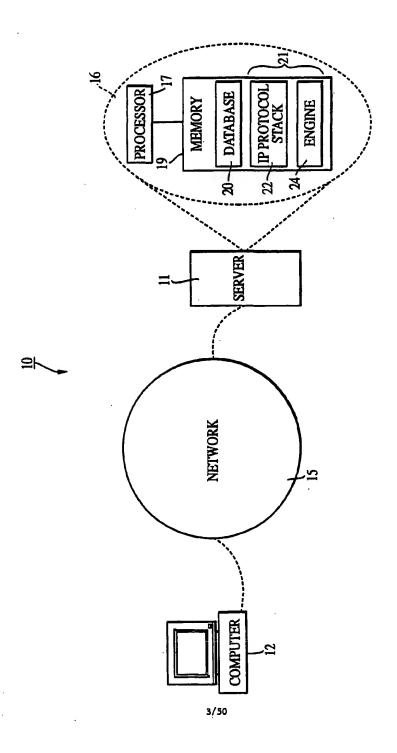


FIG. 4



HG. 4

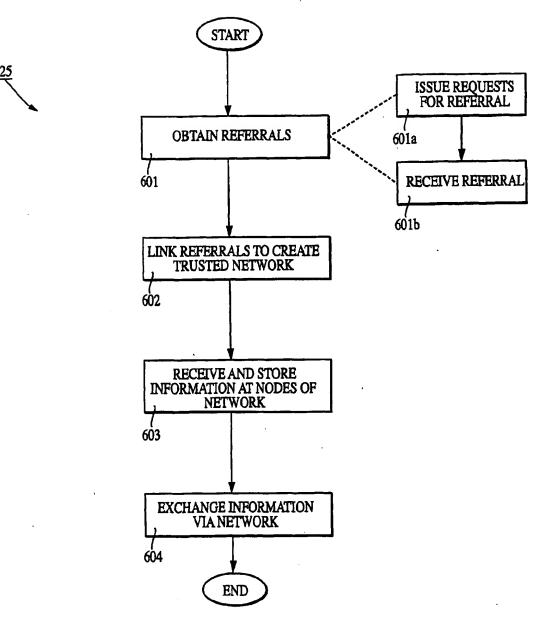
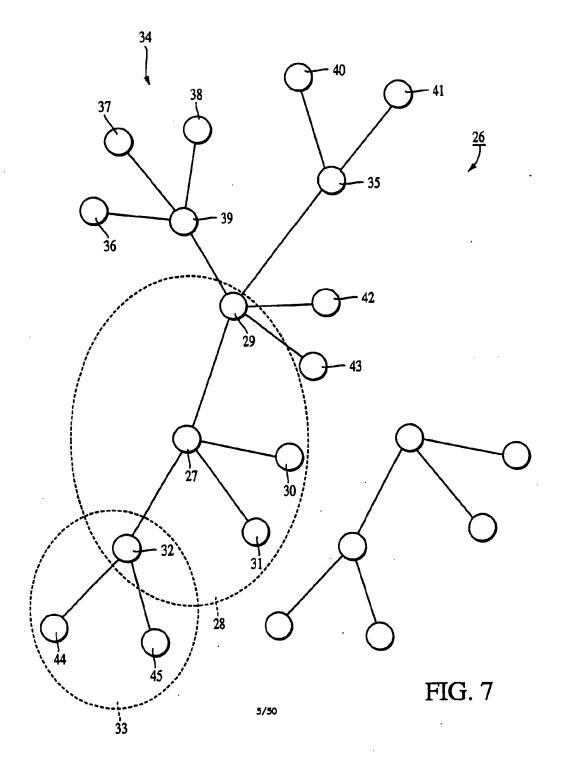


FIG. 6

4/50



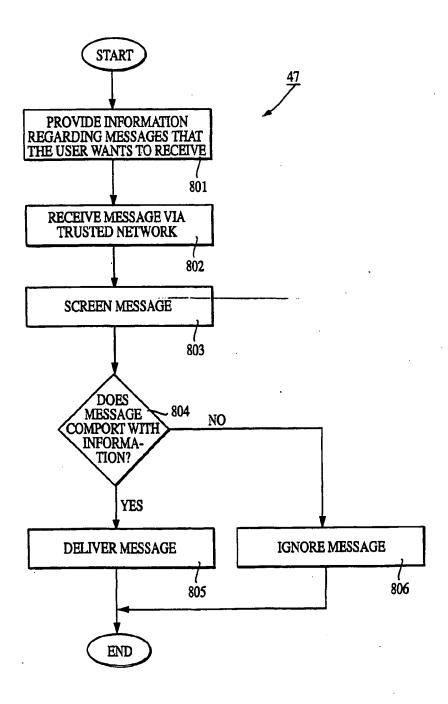


FIG. 8

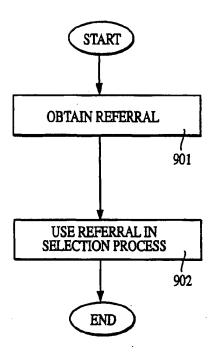


FIG. 9

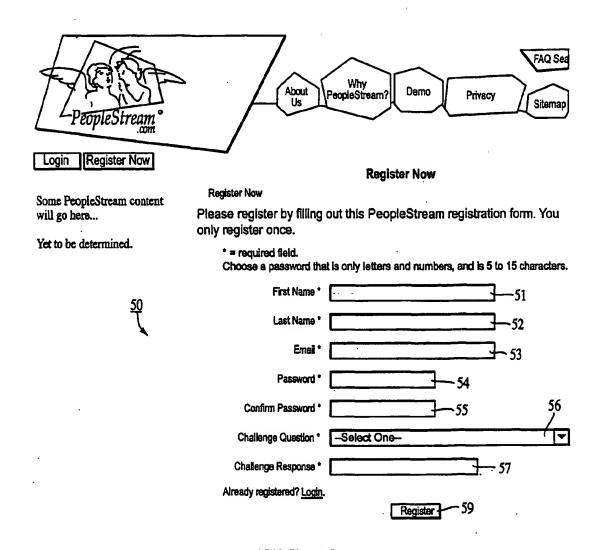


FIG. 10

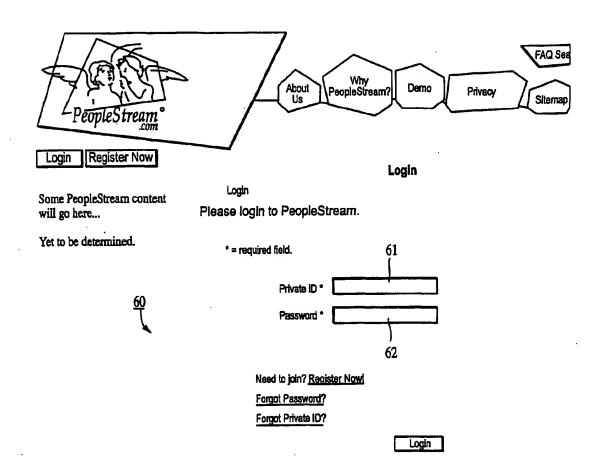
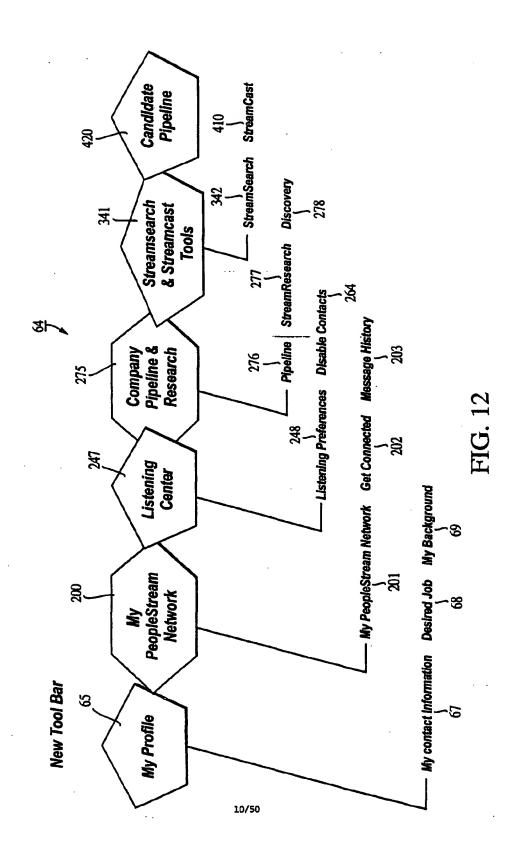


FIG. 11



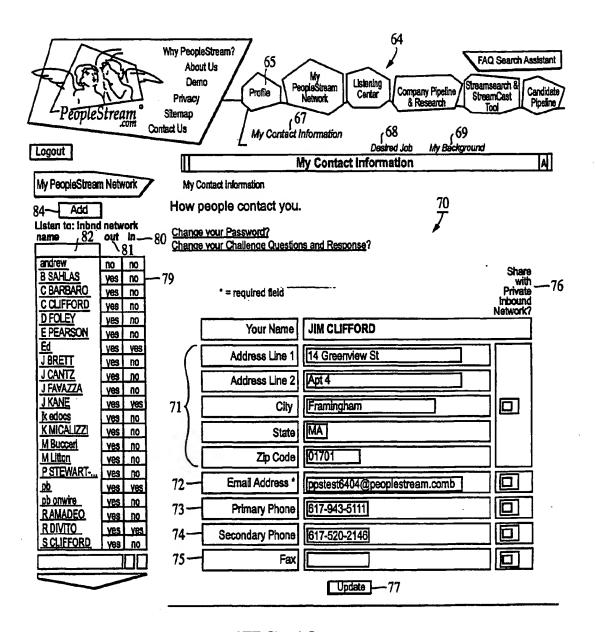
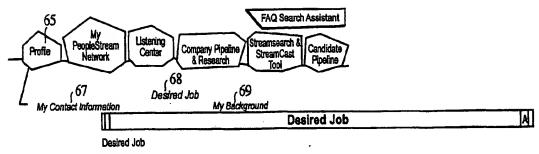


FIG. 13



Use your streams to catch your dream job.

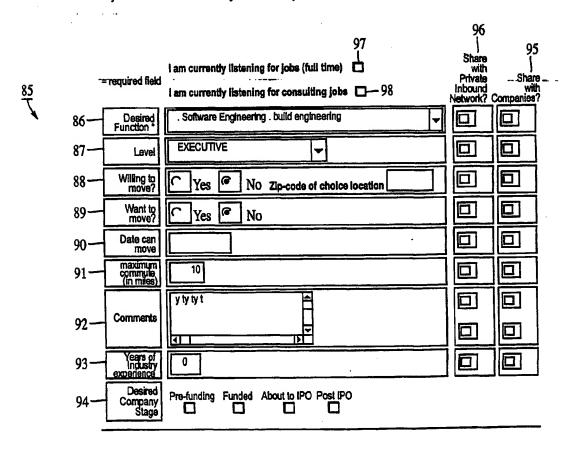


FIG. 14

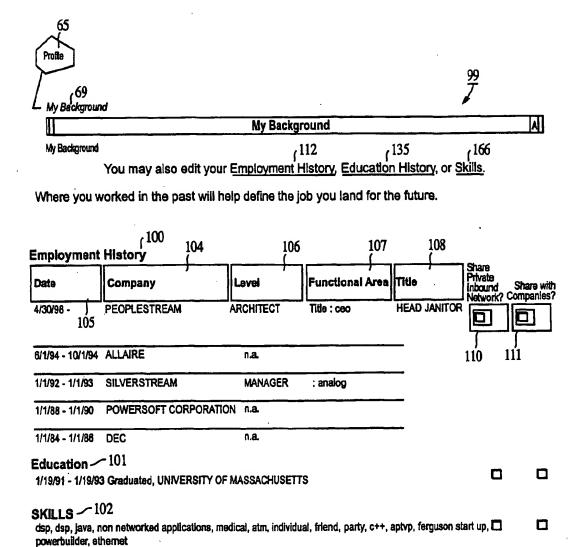


FIG. 15

	Employment H	istory		A
My Background: Employment History You may also ed	135 lit your <u>Education Histo</u>	_{ 166 ry or <u>Skills</u> .		113 7
Where you have worked in the tagline?).	e past tells a lot about w	here you will be him	ed in the futu	ıre (do you like
20			/ ¹¹⁷	/ ¹¹⁹
			Share with Private in- Bound?	Share with Company?
Company: PEOPLESTREAM	How Long: 2 years	Location: Cambridge MA	Ø	Ø
Position Area: Title: cec	Position Title: HEAD JANITOR			
Company: ALLAIRE Position Area: :	How Long: 4 months Position Title: N/A	Location: CAMBRIDGE M	IA 🗹	Ø
Company: SILVERSTREAM	How Long: 1 year	Location: BURLINGTON MA	Ø	
Position Area: Hardware Engineering: analog	Position Title: N/A			
Company: POWERSOFT CORPORATION Position Area:	How Long: 2 Years Position Title: N/A	Location: CONCORD MA		Ø
Company: DEC	How Long: 2 years	Location: PALO ALTO CA	Ø	
Position Area: :	Position Title: N/A			
114— Ad	d Employment Record Ad	d Leave of Absence -	-115	

FIG. 16

Add/Edit Employment History

My Background: Employment History; add/Edit Employment History

/ 135 / 166

You may also edit your Education History or Skills.

Where you have worked in the past tells a lot about where you will be hired in the future.

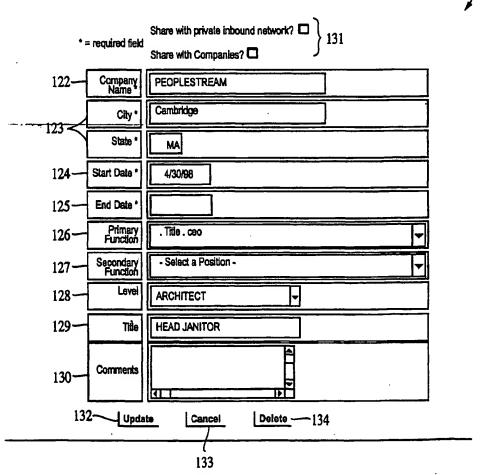


FIG. 17

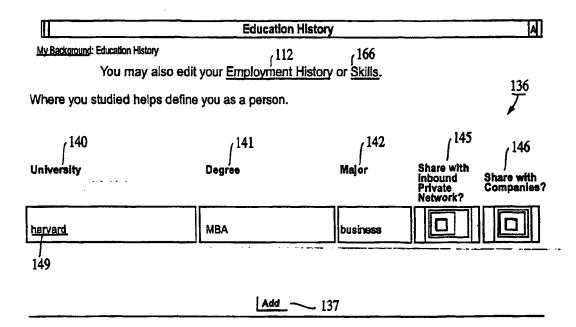
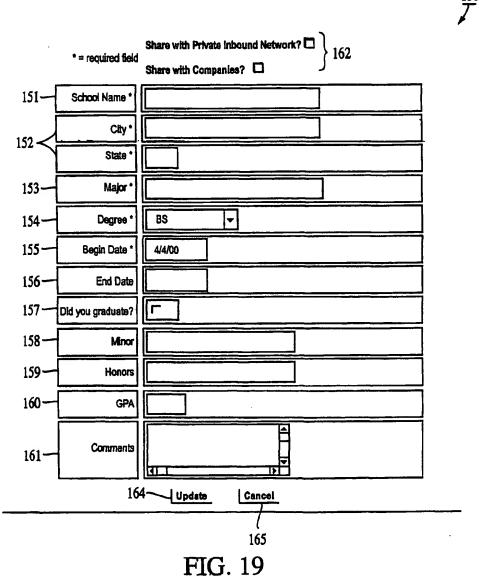


FIG. 18

Add/Edit Employment History			A
My Background: Education History: add/Edit Education History	(112	,166	
You may also edit your Employment	t History o	or <mark>Skills.</mark>	

Where you studied helps define you as a person.



	Skills	A
My Background: Skills: Edit You may also edit your Emp	112 Doloyment History or Educ	,135 cation History.
Your current skills aptyp friend Individual non networked applications		170 Remove 173
Enter New Skills Option1: Manually (comma delimited):	·	Add - 172
Option2: Choose by Category: Choose — 176		117
Option3: Choose Alphabetically: Choose		

FIG. 20

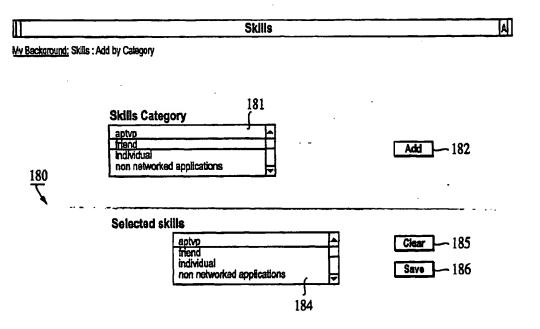
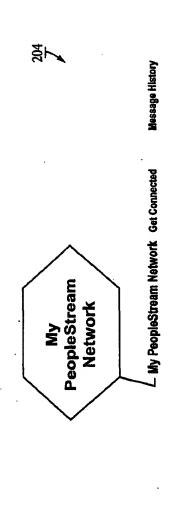


FIG. 21

	Skills	
Background; Skills: Add Alphabetically		
Skill List aptyp friend Individual non networked applications	Add — 191	190
Selected skills aptyp friend individual non networked applications	Clear — 192 Save — 193	

FIG. 22



Connect and get connected with your trusted network.

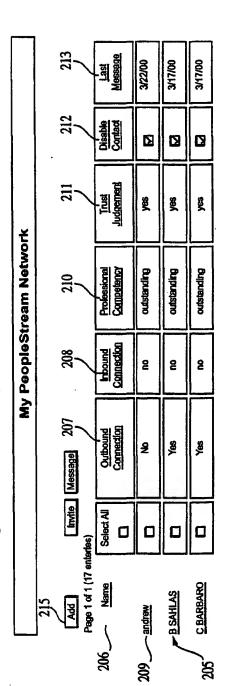


FIG. 23

216

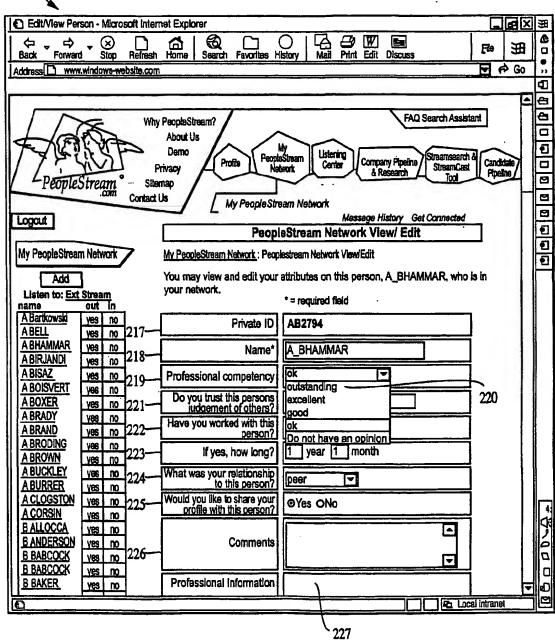
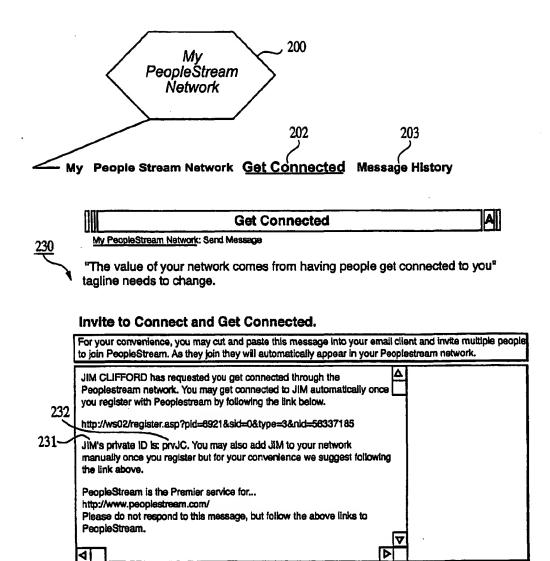


FIG. 24



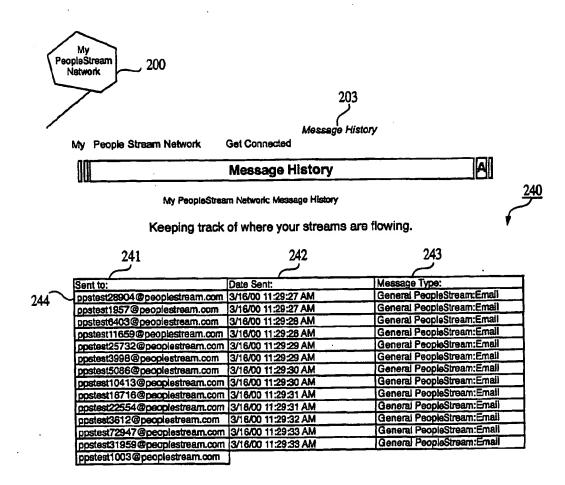


FIG. 26



Message History

My People Stream Network

Get Connected

Message History	A

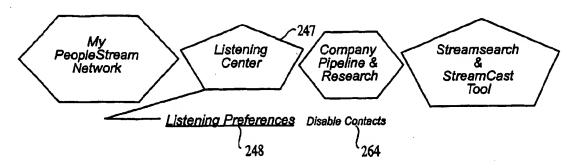
Message History

Keeping track of where your streams are flowing.

<u>245</u>

Sent to:	ppstest32671@peoplestream.com
Date sent:	4/4/00 11:54:26 AM
Message Type:	General PeopleStream Email
Message content:	JIM CLIFFORD has sent this email from the PeopleStream network Please follow these links to Get Connected http://wso2/login.asp/pid=6921&sid=5Z636&N/d=36665&Type=5&td=66692 PeopleStream is the Premier service for http://www.peoplestream.com/ Please don't respond to this message, but follow the above links to PeopleStream.

Send Back

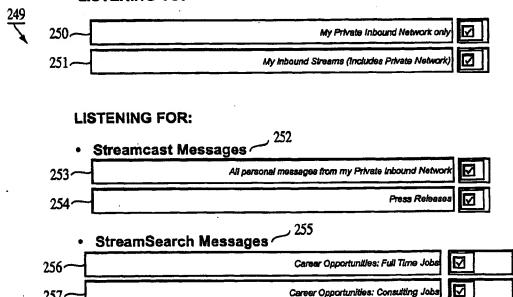


I. STREAMLISTENING PREFERENCES

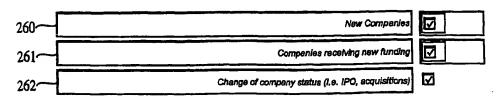
LISTENING TO:

257-

258-



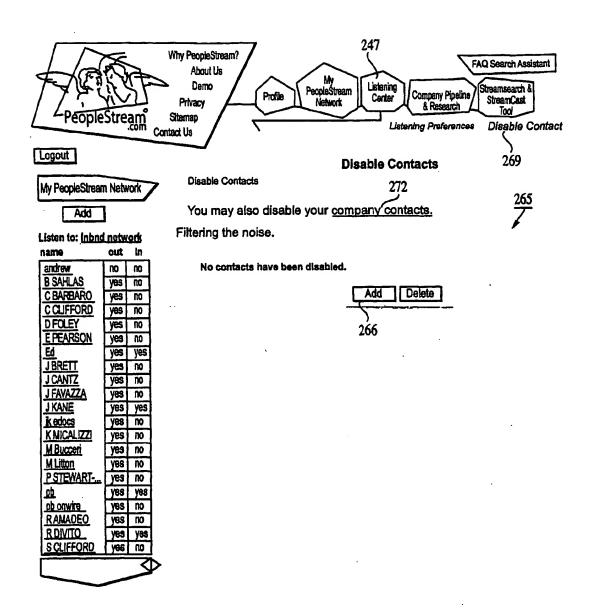
II. PEOPLESTREAM.com LISTENING PREFERENCES

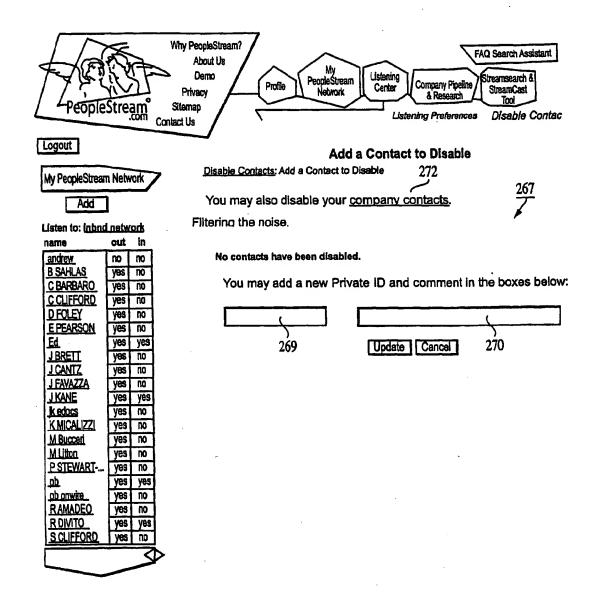


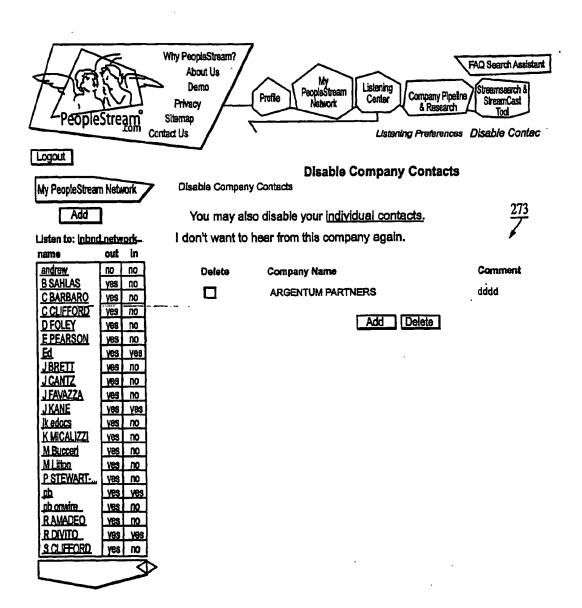
Advice Request

区

FIG. 28







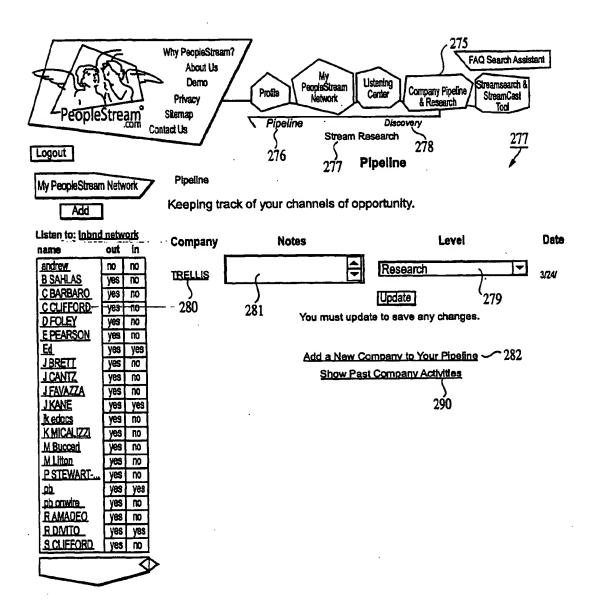
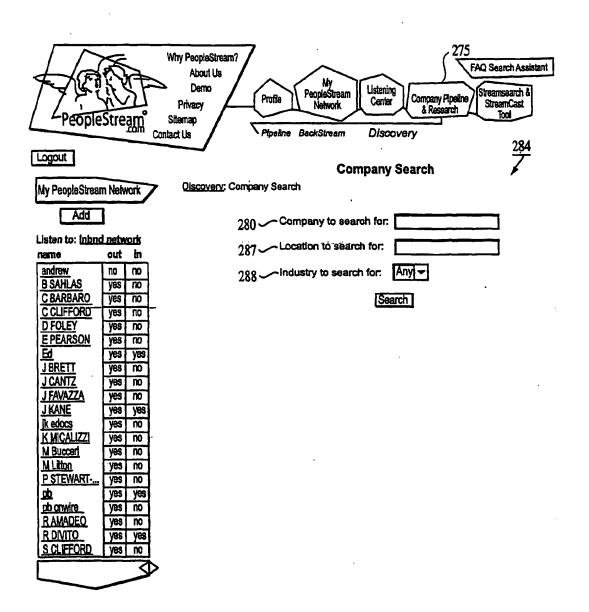
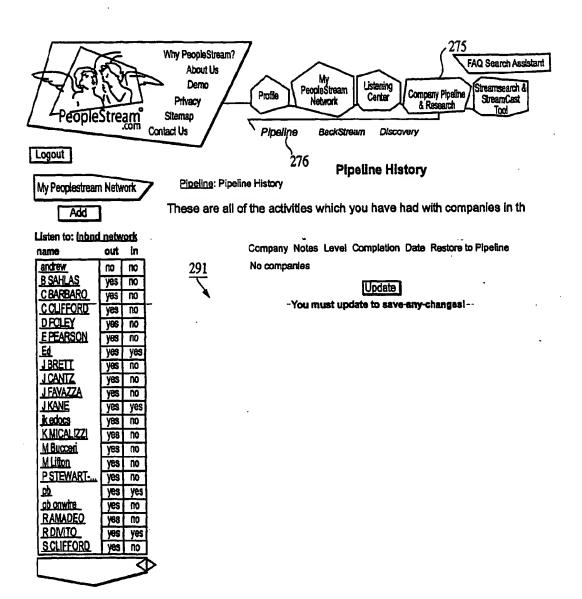
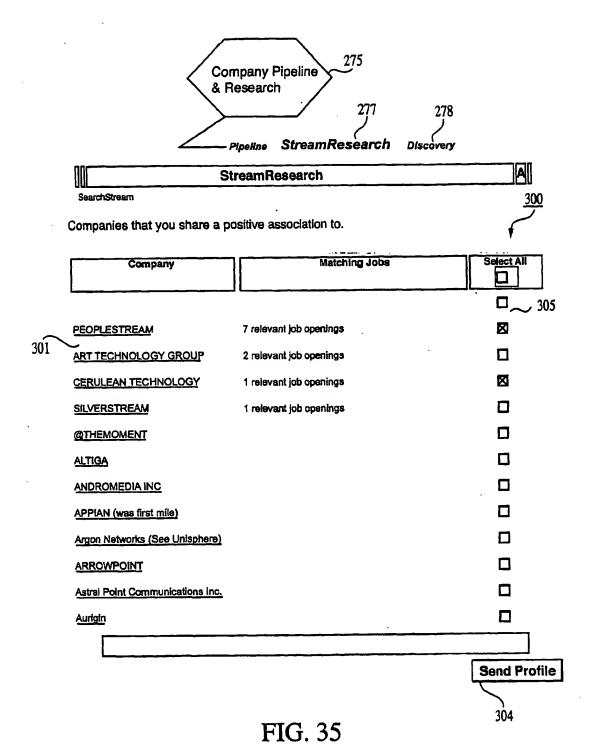


FIG. 32







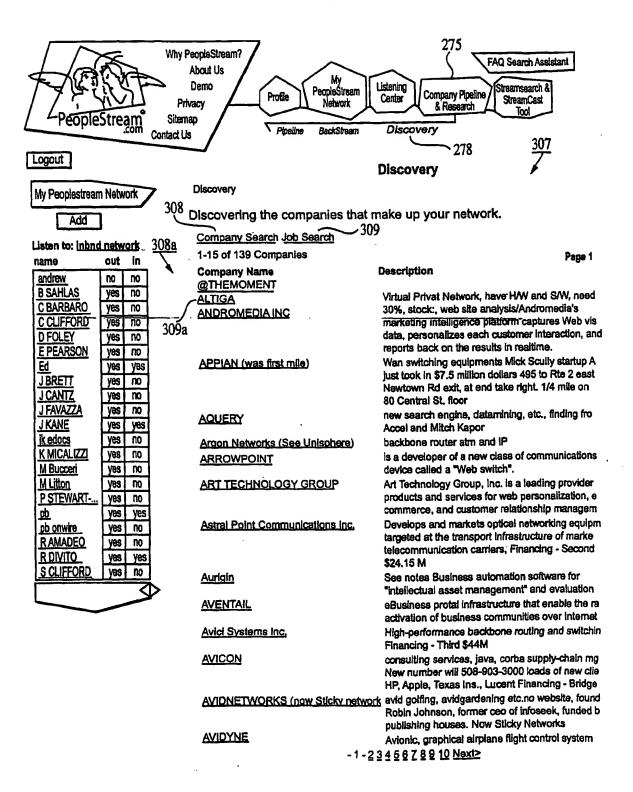
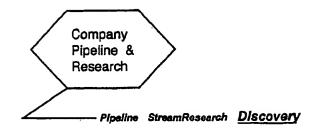


FIG. 36



Company Information

Discovery: Company Search: Results for 'ALTIGA': Company information

<u>320</u>

ALTIGA

Company Investors
BESSEMER VENTURE PARTNERS
Commonwealth Capital Ventures II
Highland Capital Partners
Highland Capital Partners
PREDICTIVE SYSTEMS
US ROBOTICS
PACKET ENGINES
Columbia Capital

Location

124 Grove ST. Suite 205 Franklin, MA 02038

Description

Virtual Privat Network, have H/W and S/W, need S/W

Contact Information:

Phone: 508-541-7300 Fax: 541-7030

BackStream

Genealogy

321

FIG. 37

People	Stream	About Us Demo Privacy Sitemap Contact Us Pipeline BackStream Discovery FAQ Search A Streamsearc Canter Canter Company Pipeline & Research Tool Tool	h &
Logout			310
		Company Search	7
My Peoplestream	n Network	Discovery: Company Search	/
Add	1		
- Add	1	Company to search for:	
Listen to: inbno	<u>i network</u>		
name	out in	Location to search for:	
andrew	no no	Industry to search for: Any	
B SAHLAS	yes no	Industry to search for: Any 🗹	
C BARBARO	yes no	Search	
C CLIFFORD	yes no		
D FOLEY	yes no		
E PEARSON Ed	yes no	•	
JBRETT	yes no		
JCANTZ	yes no		
J FAVAZZA	yes no		
JKANE	yes yes	•	
ik edocs	yes no		
K MICALIZZI	yes no		
M Bucceri	yes no		
MLitton	yes no		
P STEWART	yes no		
pb pb	yes yes		
pb onwire R AMADEO	yes no		
R DIVITO	yes yes		
SCLIFFORD	yes no	·	
	لكس		

FIG. 38

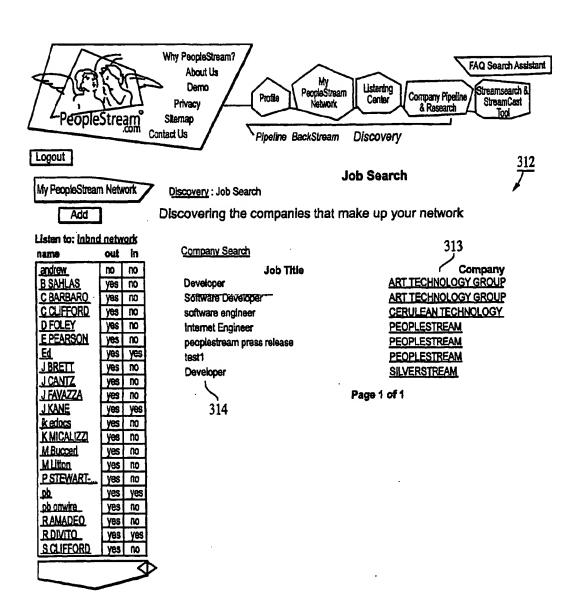


FIG. 39

Genealogy

Discovery: Company Search: Results for 'ALTIGA': Company Information: Genealogy

ALTIGA
Employees 322
Founders
Key Hires (maybe) 324
Investors
Board Members 326

BackStream 327

FIG. 40

	Discovery: Company Search: Result	ts for 'ALTIGA': Compa	uny information: Ba	ckStream	
222		ALTIGA			
330	BackStream?				
7	331 ~	Employees			
•	372	Founders			
	373	Key Hires		•	
	374	Investors			
	375	Board Members			
	313				
	Genealogy	·		Send Profile	
	321			340	

BackStream

FIG. 41

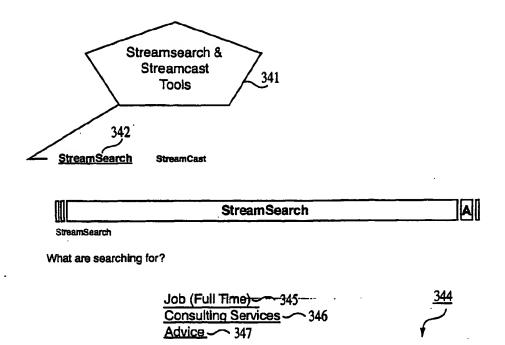


FIG. 42

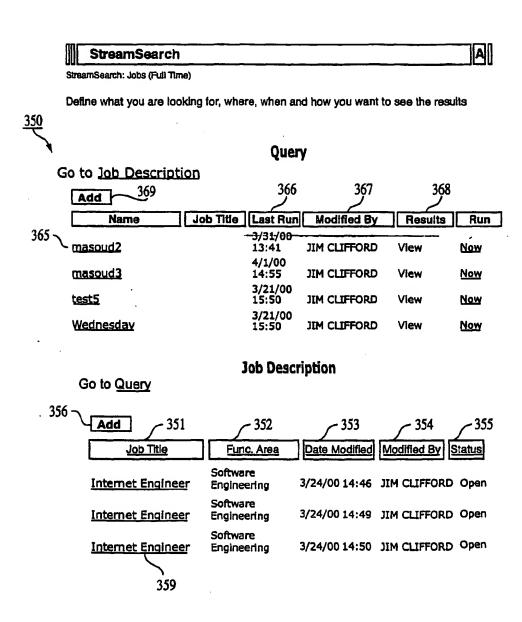


FIG. 43

PeopleStrea	m Sitemap	Profile PeopleStream Center Company Pipeline StreamSearch & StreamCest Tool TreamSearch StreamCast 341
Logout		358
My PeopleStream Netwo	StreamSearch: Job De	342 Job Descriptions
Add		u're looking to fill.
Listen to: inbnd netwo		•
	in Describe 305	PEOPLESTREAM
<u> </u>	no Title	EUPLESTREAM .
C BARBARO YBS	no -	
1	no Description	·
	no Ves	
J BRETT Yes	no Level	INDIVIDUAL
	no * ZIP Code	02142 Specify the ich Incation
J KANE yes	yes no Relocation	
7	no Relocation no Assistance	O Yes ® No
M Bucceri yes M Litton yes	no Position Status	Opened -
P STEWART yes	© Candidate Re	equirements — 361
ob onwire yes	no Min. years Experience	0
RAMADEO yes	no theries its	
R DIVITO yes SCLIFFORD yes	no Salary	Eliter V for 10 maximum.
	* Functional Area	-Select one Functional Area-
	Skills	Add or Remove Skills
		Save Cancel

FIG. 44

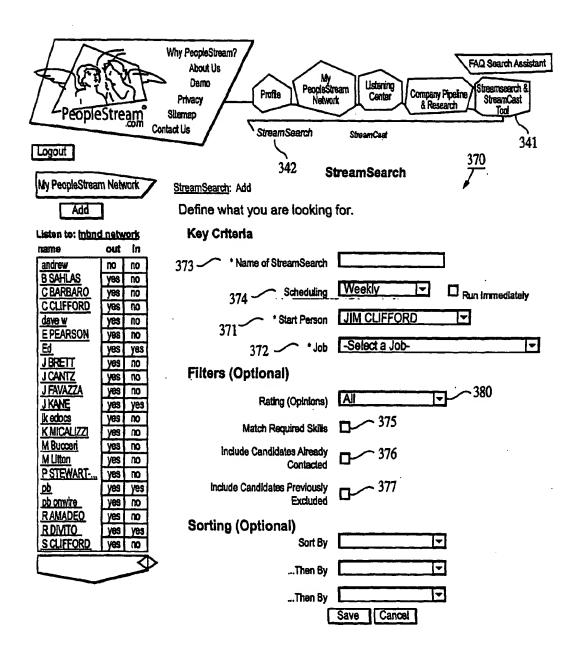


FIG. 45

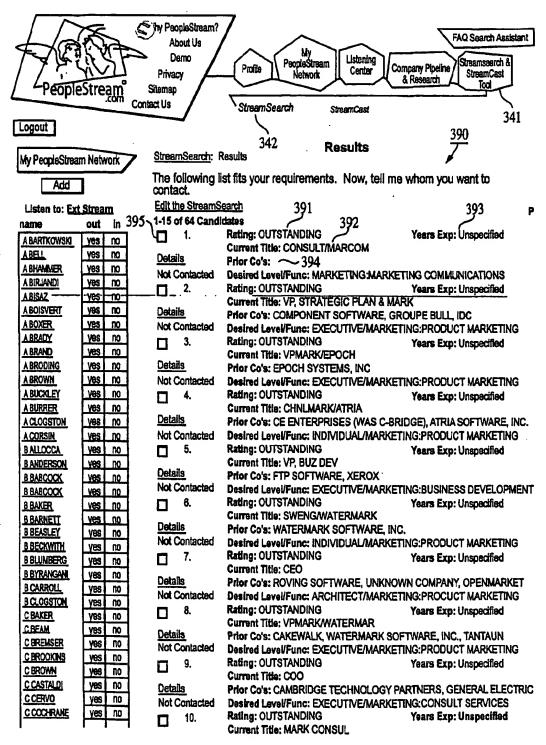


FIG. 46

StreamSearch A

StreamSearch: Consulting Services

Define what you are looking for, where, when and how you want to see the results

400

Query

Go to Job Description

-		
Add		

· Name	Job Title Las	t Run Modified i	By Results	Run
masoud2	3/3: 13:	1/00 41 JIM CLIFFOR	RD View	Now
masoud3	4/1, 14:		RD View	Now
test5	3/2: 15:	1/00 50 JIM CLIFFOR	RD View	Now
Wednesday	3/2: 15:	1/00 5 0 JIM CLIFFOF	RD View	Now

Job Description

Go to Query

Add

Job Title	Func. Area	Date Mo	dified	Modified By	Status
GUI Engineer	SoftwareEngineer	3/24/00	14:46	JIM CLIFFORD	Open
<u>CPA</u>	Accounting/Finance	3/24/00	14:49	JIM CLIFFORD	Open
<u>PR</u>	PR/Marketing	3/24/00	14:50	JIM CLIFFORD	Open

FIG. 47



StreamSearch: Advice

Define what you are looking for, where, when and how you want to see the results

401

Query

Go to Topic Description

Add

Name	Topic Title Last Run	Modified By	Results	Run
masoud2	3/31/00 13:41	JIM CLIFFORD	View	Now
masoud3	4/1/00 14:55	JIM CLIFFORD	View	Now
test5	3/21/00 15:50	JIM CLIFFORD	View	Now
Wednesday	3/21/00 15:50	JIM CLIFFORD	View	Now

Topic Description

Go to Query

Add

Topic Title	Area	Date Modified	Modified By	Status
<u>C++</u>	Software Engineer	3/24/00 14:46	JIM CLIFFORD	Open
83B Election	Accounting/Finance	3/24/00 14:49	JIM CLIFFORD	Open
Press Release for new product	PR/Marketing	3/24/00 14:50	JIM CLIFFORD	Open

FIG. 48

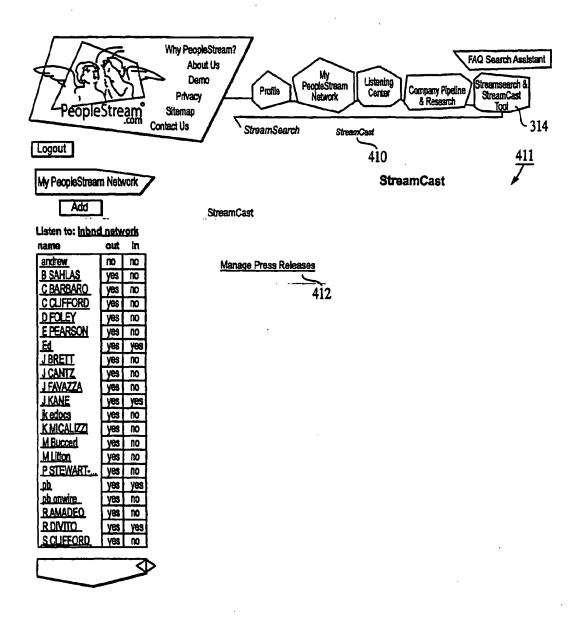


FIG. 49

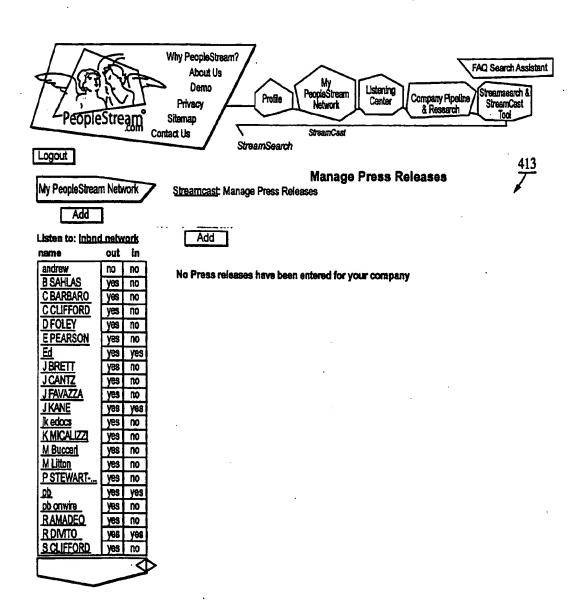


FIG. 50

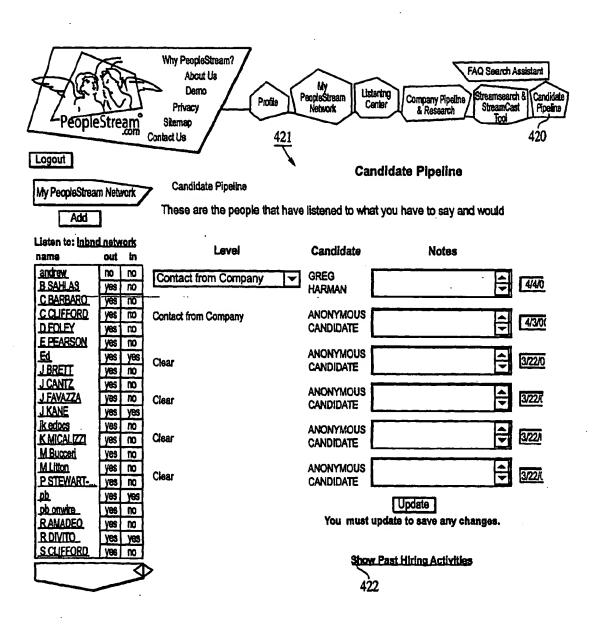


FIG. 51

1 / X	Why PeopleStream?	_	5100-	
AN MARKA	About Us Demo	Ny Little		h Assistant
1 A PROSE	Privacy Profile	PeopleStream Listening Center	Company Pipeline Streams	Cast
PeopleStream	Sitemap		a Nesearch To	
	entact Us			<u>423</u>
Logout		Candidate Pip	eline History	\mathcal{F}
My PeopleStream Network	Candidate Pipeline: Candidat	·		
Add	Your history with candida	47.A		
<u> </u>	Level Candidate	424 Notes	Completion Date	Res Pl
Listen to: Inbnd network name out in	ANONYMOUS			FI
andrew no no	CANDIDATE		3/22/00	
B SAHLAS Ves no	AMONAMONO			
C BARBARO yes no	ANONYMOUS CANDIDATE	1	3/22/00	
C CLIFFORD YES NO	WHO ID ALL	L		
D FOLEY yes no	ANONYMOUS		3/22/00	
E PEARSON yes no	CANDIDATE		3/22/00	
JBRETT yes no	ANONYMOUS			
JCANTZ yes no	CANDIDATE		3/22/00	
J FAVAZZA yes no				
J KANE yes yes	ANONYMOUS CANDIDATE	}	3/22/00	
ik edocs yes no	ONIOIDNI C			
K MICALIZZI yes no	ANONYMOUS		3/22/00	
M Bucceri yes no M Litton yes no	CANDIDATE	<u> </u>	3/22/00	•
P STEWART- yes no				
pb yes yes	ANONYMOUS	1	3/22/00	
pb onwire yes no	CANDIDATE	L		
RAMADEO yes no	ANONYMOUS		3/22/00	
R DIVITO yes yes S CLIFFORD yes no	CANDIDATE	<u></u>	3/22/00	
SCLIFFORD yes no	ANONYMOUS			
	CANDIDATE	}	3/16/00	
				
	ANONYMOUS CANDIDATE	f	3/16/00	
	CANDIDATE			
	ANONYMOUS		3/16/00	
	CANDIDATE	L	3/16/00	
	ANONYMOUS			
	CANDIDATE		3/16/00	
•				
	ANONYMOUS		3/16/00	
	CANDIDATE		4 1444	

FIG. 52